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Edited by

FRANCIS HEMMING, C.M.G., C.B.E.

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BULLETIN OF ZOOLOGICAL NOMENCLATURE

Volume 7, Parts 1/2 (pp. 1-60)

25th February, 1952

SEVEN PROBLEMS OF ZOOLOGICAL NOMENCLATURE INVOLVING THE CLARIFICATION, AMENDMENT OR EXPANSION OF THE "RÈGLES INTERNATIONALES" WHICH WILL BE CONSIDERED BY THE FOURTEENTH INTERNATIONAL CONGRESS OF ZOOLOGY, COPEN- HAGEN, 1953: PRELIMINARY APPEAL TO ZOOLOGISTS FOR ADVICE

By FRANCIS HEMMING, C.M.G., C.B.E.

(*Secretary to the International Commission on Zoological Nomenclature*)

1. The present introductory note is intended to draw the attention of zoologists to seven problems of zoological nomenclature that are at present under consideration and on which it will be the duty of the International Commission on Zoological Nomenclature to submit definite proposals to the Fourteenth International Congress of Zoology when it meets in Copenhagen in 1953. These problems, each of which involves the clarification, amendment or expansion of the *Règles Internationales*, were considered in a preliminary fashion in Paris in 1948 both by the International Commission and by the Thirteenth International Congress of Zoology. No decisions were then taken on these matters, for it was felt that further study of the problems involved was desirable before definitive decisions were reached. It was accordingly then decided that, as Secretary to the Commission, I should make a further study, in consultation with interested zoologists and palaeontologists, of current views and practice in these matters, and that in the light of these consultations I should furnish Reports on these problems with concrete recommendations for consideration and decision at Copenhagen in 1953.

2. The seven problems involved are the following:—

- (1) The reform of Article 19 of the *Règles* relating to the conditions in which emendations of scientific names should be made or accepted (Commission's reference Z.N.(S.)356);

- (2) The substitution for the existing Articles 4 and 5 of the *Règles* of comprehensive provisions relating to the naming of Families (including Super-Families) and supra-generic categories of lower rank (Commission's reference Z.N.(S.)357) ;
- (3) The possible addition to the *Règles* of provisions governing the naming of Orders and higher taxonomic categories (Commission's reference Z.N.(S.)360) ;
- (4) The species to be accepted as the type species of a nominal genus, the name of which was first published in a generic synonymy (Commission's reference Z.N.(S.)387) ;
- (5) The application of a trivial name which, when first published, is applied to a particular species or specimen but which is stated also to be a substitute name for some previously published name (Commission's reference Z.N.(S.)361) ;
- (6) The question of whether, and subject to what conditions, the concept of a "neotype" should be officially recognised in the *Règles* (Commission's reference Z.N.(S.)358) ;
- (7) The problem of securing stability in zoological nomenclature (Commission's reference Z.N.(S.)359).

3. In the period which has elapsed since the duty of preparing Reports on the foregoing subjects was entrusted to me, I have sought, as a first step, to collect all statements on these questions which have so far been published in any quarter, in order thereby to assemble the various issues involved on which decisions will need to be taken by the Commission and the Congress when dealing with these problems. With the same object in view I have taken every opportunity that has offered for obtaining opinions from interested specialists, either by personal discussion or by correspondence. As the result of this examination of the literature and of these preliminary discussions, a stage has, I think, been reached when it is possible to initiate the main consultation with specialists by putting before them the issues which appear to call for decision and by seeking their assistance and advice on the action which it is desirable should be taken by the Copenhagen Congress in 1953. In August this year (1951) I took the opportunity presented by the meeting in Amsterdam of the Ninth International Congress of Entomology to place before that representative gathering of entomologists the issues which, as it seemed to me, were involved in the seven problems which I had been charged to investigate, and to seek their assistance and advice on those problems.

4. I feel that the stage has now been reached when it is desirable to seek the widest possible measure of general consultation, and for this purpose, I have prepared a note in regard to each of the problems on which I have been instructed to report, in which I set out the problems which appear to call for attention and, in some cases, put forward suggestions as to the solutions which might be adopted. The papers so prepared are being published in the *Bulletin of Zoological Nomenclature* immediately after the present introductory note.

5. I now earnestly appeal to zoologists and palaeontologists generally to study the seven problems remitted by the Paris Congress for decision by the Copenhagen Congress two years' hence and to join in the search for solutions of those problems which will at once be the most practicable and the most acceptable to the general body of workers in zoology and in the fields of applied biology. I hope very much that all Nomenclature Committees of Museums and other Scientific Institutions which receive copies of the papers now to be published will take into serious consideration the issues raised by these problems, and, having done so, will furnish statements setting out the views of their members on the questions enumerated in the papers which I have prepared and also on any other issues raised by these problems, to which, in their opinion, consideration ought to be given. I make a similar appeal to every individual zoologist and palaeontologist who may read the present paper and who is interested in any of the problems here discussed. In order that the Reports on these subjects may not only be completed but also published in the *Bulletin of Zoological Nomenclature* well in advance of the meeting of the International Congress of Zoology at Copenhagen in 1953, Nomenclature Committees and individual specialists who respond to the present appeal will be rendering a doubly valuable service if they will be so kind as let the International Commission have their comments at latest by 30th June, 1952.

6. Further, it is particularly requested that, in order to save time on the receipt of communications in the Office of the Commission (having regard to the fact that it possesses no whole-time clerical or typing staff), Nomenclature Committees and individual specialists who respond to the present appeal will be good enough to prepare separate statements on each of the problems on which they may decide to comment and should clearly affix to each statement the Commission's Reference Number as cited in paragraph 2 of the present appeal. Finally, much time and unnecessary expense will be saved if Nomenclature Committees and individual specialists will be good enough to send their comments in duplicate, in typescript, and typed on one side of the paper only.

7. All communications to the Commission prepared in response to the present appeal should be addressed to myself, as Secretary to the Commission (address: 28 Park Village East, Regent's Park, London, N.W.1, England).

THE EMENDATION OF ZOOLOGICAL NAMES: AN APPEAL TO ZOOLOGISTS FOR ADVICE

By FRANCIS HEMMING, C.M.G., C.B.E.

(*Secretary to the International Commission on Zoological Nomenclature*)

(Commission's reference Z.N.(S.)356)

(For the decision by the Thirteenth International Congress of Zoology that an investigation should be made in regard to this subject, see 1950, *Bull. zool. Nomencl.* 4 : 141)

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PART I. GENERAL CONSIDERATIONS

(a) The historical background

1. Historical analysis: Ever since the adoption of the *Règles* fifty years ago Article 19 has proved one of the most difficult of all the Articles comprised in it to interpret. This difficulty has been felt by individual specialists and by the International Commission alike. Individual specialists have interpreted this Article in a quite extraordinary variety of ways, some adopting an attitude of such extreme rigidity as made it possible for them to reject almost every emendation suggested by other workers, while at the other end of the scale specialists who were also Latin and Greek scholars of distinction interpreted this Article as justifying—and, indeed, calling for—emendations of so far-reaching a kind as in effect to constitute the rejection of the original name on the ground that it was incorrectly formed and the substitution for it of a name which, though faultless from the standpoint of the Classical Languages, differed so substantially from the name, as originally published, as virtually to constitute a new name. Between these two extreme schools of thought, each of which had the merit that it stood for a clearly defined and logically defensible point of view, there was at all times a great mass of workers whose attitude towards the problem of the emendation of names was not based upon any general principle but was apparently dictated mainly by considerations of convenience and habit. Nor is the International Commission itself able to claim that in every one of the eight *Opinions* (*Opinions* 26, 27, 29, 36, 41, 60, 61, and 63) in which it has given interpretations of Article 19 in relation to individual cases it has adopted a consistent line of policy. For it cannot be questioned that the rulings given in some of these *Opinions* are irreconcilable with those given in others. It must be admitted therefore that Article 19 in its present form has been a complete failure and has probably actually contributed to, rather than lessened, the difficulties which inevitably arise in dealing with so complex a subject as the conditions in which the emendation of names should be either permitted or required.

2. Action taken in Paris in 1948 by the International Commission on Zoological Nomenclature and by the International Congress of Zoology: It will be readily appreciated that in the circumstances described above both the International Commission on Zoological Nomenclature and the International Congress of Zoology were in considerable difficulty when in Paris in 1948 those bodies came to consider Article 19 of the *Règles* and the interpretative *Opinions* which had been rendered in regard to it in relation to individual cases. In the first place the Commission had received, but had been unable adequately to consider, suggestions for the amendment of Article 19 in various respects; second, it was necessary to reach at least some provisional conclusions regarding the interpretations of this Article in previous *Opinions*, having regard to the decision which it had already taken to recommend the Congress to incorporate into the *Règles* all such interpretations, subject to the clarification or amendment of those interpretations where this was judged to be necessary. In the case of Article 19, the Commission recommended, and the Congress approved, a twofold line of action. First, the whole question of the provisions which in the long-term should regulate the emendation of names was remitted to myself, as Secretary to the Commission, for investigation

in consultation with interested specialists with a view to the submission of a comprehensive Report to the next (Copenhagen) Congress in 1953. Second, it was necessary for the Commission and the Congress to devise some provisional scheme for regulating the emendation of names, pending the adoption five years later of a permanent scheme by the Copenhagen Congress, for some temporary arrangement was clearly necessary for the purpose of removing the worst of the ambiguities which then attached to the interpretation of Article 19. The Commission accordingly recommended, and the Congress agreed to read into the foregoing Article the substance of the rulings given in *Opinions* 27, 36, 41, 60, and 61, together with a modified version of the ruling (in regard to the meaning of the word "évident" given in *Opinion* 26, 1950, *Bull. zool. Nomencl.* 4: 142-144). Particular care was taken to make it clear that these decisions were to be regarded as being of an interim character only, it being expressly stated in the preamble to these decisions (*loc. cit.* 4: 142, line 1) that they were "without prejudice to" the findings to be reached in the light of the present investigation. We are free, therefore, in approaching the question of the provisions relating to the emendation of names to be inserted in the *Règles* in place of the existing Article 19, to regard ourselves as entirely untrammelled by governing decisions of any kind.

3. Relationship of Article 19 to other Articles relating to the formation and orthography of names: Prior to the Paris Congress of 1948 those zoologists who desired to see the fewest possible changes in the original spelling of names occasionally advanced the view that Article 19 must be regarded as in some way superior to, and of greater force than, other Articles relating to the formation and orthography of names. Those who advanced this view claimed therefore that, if an author, when publishing a new name, contravened any of the provisions of Articles 14, 15, 16, 18, and 20, the contravention so committed was afforded protection by Article 19 unless it was "évident" that the contravention in question was attributable to one or other of the three causes specified in the last-named Article. Since it is in the nature of the case hardly ever possible to establish such a proposition, the effect of this argument, if validly based, would have been to perpetuate every error committed in breach of any of the five Articles cited above. Against this argument was advanced the view that there was no justification for claiming that one Article was superior to another, the only distinction between different parts of the *Règles* being between the mandatory provisions embodied in the "Articles" and the non-mandatory provisions embodied in the "Recommendations." Accordingly, those who held this view were of the opinion that the provisions contained in the five Articles cited above were entirely independent and self-contained, being in no respect connected with, or dependent upon, Article 19. This matter was considered by the International Commission at the Fourth Meeting of its Paris Session in 1948 when it agreed to submit a recommendation—which was subsequently approved by the Congress—that words should be inserted in the *Règles* to make it clear that, "where a name is published in a form or in a manner which contravenes any of the provisions contained in Articles 14-16, 18, or 20, the error so committed is automatically to be corrected by subsequent authors" (1950, *Bull. zool. Nomencl.* 4: 68). It will be noted that this decision not only entirely disposes

of the contention that Article 19 was in some way superior to the Articles cited above, but draws a sharp distinction between (a) names which are erroneously formed by reason of not being in accord with one or other of the five Articles cited above and (b) names which are erroneously formed for other reasons, the former names, it was decided, being subject to automatic "correction," the latter to "emendation" under the processes prescribed by Article 19. In view of the foregoing decision, we see that the provisions in the five Articles referred to above are irrelevant to, and therefore fall outside the scope of, the present investigation of the problems relating to the emendation of names dealt with in Article 19.

4. Relationship of Article 19 (emendation of names) to Article 32 (rejection of names): In the preceding paragraph we considered have an argument which prior to 1948 was sometimes advanced by those workers who favoured the maintenance wherever possible of the original spelling of names, even when that spelling contravened other Articles in the *Règles*, and have noted the rejection of this contention by the Paris Congress. We must now consider for a moment another argument sometimes advanced by workers of the same school of thought, which, though having the same object as the argument referred to above, was entirely inconsistent with that argument. Under the first argument Article 19 was to be regarded as superior to other Articles relating to the formation and orthography of names; under the second argument Article 19 itself, it was claimed, was subordinate to, and governed by, Article 32; this argument was based upon the appearance in Article 32 of the words: "Un nom . . . , une fois publié, ne peut plus être rejeté . . ." ("A name . . . once published, cannot be rejected . . .") This argument was equivalent to a contention that Article 19 had been inserted in the *Règles* through some oversight, for, owing to the superior force of Article 32, it could never be applied. Those who rejected this claim were quick to point out that, while it was true that the words quoted above did appear in Article 32, it was quite incorrect to drag them out of their context in this way, for in that context these words were strictly limited by the words "pour cause d'impropriété" ("because of inappropriateness"); the Article read in its entirety lent no colour at all, in the view of these workers, to the contention that this Article was superior to, and in fact nullified, Article 19. This matter was considered by the International Commission at the Ninth Meeting during its Paris Session in 1948, when it was agreed to submit a recommendation—which was subsequently approved by the Congress—that words should be inserted in the *Règles* "to ensure the co-ordination of Articles 19 and 32 by making it clear that nothing in the last-named Article detracts from the generality of the provisions of Article 19" (1950, *Bull. zool. Nomencl.* **4**: 263). In view of this decision, we need not detain ourselves further with the argument described above.

(b) General considerations

5. Need for the substitution of objective, for the present subjective, tests prescribed for determining the circumstances in which a scientific name is to be emended: In its revision of the *Règles* the Thirteenth

International Congress of Zoology in 1948 was at pains to remove provisions which depended for their interpretation upon subjective judgments reached by persons seeking to apply the *Règles*, substituting for such provisions others depending upon ascertainable objective facts. For example, up to the Paris Congress it was not clear what species should be accepted as the type species of a given nominal genus where on taxonomic grounds it appeared that the author who had selected that species to be the type species had himself misidentified the species which he had in mind and had applied to it the name of some other species. In consequence some authors had till then accepted as the type species of such a genus the species actually cited by name, while others had so accepted the species which they believed the original author had in fact intended to select. It was apparent that, if subjective taxonomic judgments on the identity of the species referred to by a given author when selecting a species to be the type species of a genus were to be permitted in interpreting Article 36, it would be impossible ever to determine beyond possibility of dispute what species should be accepted as the type species of any genus. In this as in similar cases the difficulty was overcome by the decision taken by the Congress (on the recommendation of the Commission) to insert in the *Règles* a purely objective test (1950, *Bull. zool. Nomencl.* 4 : 158-159). Applying the foregoing principle to the provisions to be prescribed for regulating the emendation of names, we see at once that in its present form Article 19 is seriously defective, for instead of prescribing the conditions in which a name is to be emended it lays down that the original orthography of a name is to be preserved, save in one set of subjective circumstances, namely when it is "évident" that any one of three specified errors is comprised in the original spelling. Such a provision is clearly incapable of securing stability in this field of zoological nomenclature, for inevitably what is "évident" to one worker will not always be so to another. For this reason alone, it is no matter for surprise that Article 19 has failed to provide definite answers in disputed cases; nor indeed is it surprising that much time and ingenuity has been dissipated in fruitless arguments as to the conditions which should be present in any given case before the existence of any of the three specified types of error should be accepted as being "évident." No one will, I think, dispute the proposition that, whatever provisions it may be decided to insert in place of the existing Article 19, those provisions should at least be linked to objective facts and should not be dependent (as is the present Article) upon the subjective views held by individual workers as to whether the existence of a given error is or is not "évident."

6. Conflict in the approach to the question of the emendation of names between zoologists who possess a knowledge of the Latin and Greek Languages and those zoologists who do not possess such knowledge: When fifty years ago the present *Règles* were adopted by the Berlin Congress, practically every zoologist who took part in the discussions which led up to the adoption of the *Règles* was possessed of a sound knowledge of the Latin and Greek Languages, while many were excellent classics. Moreover, at that time the majority of names bestowed upon animals were either genuine Latin words or Latinised Greek words or words derived from genuine Latin or Greek words; the number of names which, looked at solely as Latin

or Latinised words or words treated as such ("traités comme tels"), were evidently defective was still small. To the zoologists of that day few difficulties therefore arose in determining whether the orthography of any given name was defective and, armed as they were with their knowledge of Latin and Greek, it was natural that they should have decreed that the determining factor in this matter should be whether or not the presence of a given error was "évident." Even so, if they had taken advice on the possible ambiguity involved in such a test, they would doubtless have agreed that theoretically such a provision was open to objection. Nevertheless, they would almost certainly have taken the view that in practice no harm was likely to come of a provision drafted in this way. For what the zoologists of the Berlin Congress certainly never foresaw was the rapid and progressive decline in the knowledge of the Latin and Greek languages by their successors during the next fifty years. Nor is there any sign that this process has exhausted itself; on the contrary, everything points to the likelihood of its continuance owing to the pressing need for finding time in the curriculum of students for new subjects of a strictly zoological character. We may therefore expect that, as time goes on, the zoologist who possesses a sound knowledge of Latin, still more of Greek, will be a rare exception.

7. Need for adapting the provisions in the "Règles" relating to the emendation of names in such a way as to call for the minimum of knowledge of the Latin and Greek Languages: The changing character of zoological education discussed in the preceding paragraph which has marked the last half century is itself sufficient to call for a thorough re-examination of the assumptions upon which the existing provision (Article 19) relating to the emendation of names is based. For mistakes in the orthography of names which would have been glaringly evident, and, indeed shocking, to the classically trained zoologist of fifty years ago are often not evident at all to his successors of today and, we may confidently expect, will be even less evident—and, therefore, even less objectionable—at least to the great majority of his successors of tomorrow. It seems to me, therefore—and I put this suggestion forward for comment and advice—that in any revision of Article 19 that may be agreed upon by the Copenhagen Congress full recognition should be accorded to the considerations indicated above and therefore that, whatever the size of the field within which it may be decided that the emendation of names should be permitted, the actual provisions governing the process of emending names should be as simple as possible and indeed as nearly automatic in character as they can be made. The aim should certainly be to devise criteria which are capable of being applied (1) quickly, (2) with the minimum of knowledge of the Latin and Greek languages, and (3), despite (2), without risk of giving rise to arid and time-consuming discussions of an etymological or philogocical character.

8. The problem of the emendation of names in relation to the need for stability in nomenclature: When the present *Règles* were adopted fifty years ago, the number of names to be considered in any given group was so very much smaller than it is today that the impact of nomenclatorial problems on taxonomic work was very much less, and, in consequence, it was perhaps natural that the architects of the code should have entertained

ambitious hopes for securing a high standard of technical excellence for the names used for animals. It may be supposed that this motive, coupled with the inclinations induced by the classical training then possessed by most zoologists, was responsible for the ambitious nature of the provisions in regard to the emendation of names then adopted. For ambitious those provisions undoubtedly were, contemplating, as they did, that every name (generic or trivial) published for use in zoological nomenclature should be subject to scrutiny from three points of view and that any name found to be defective in any of the three possible respects should immediately be emended to such extent as might be found to be necessary. There was—and still is—nothing permissive about the provisions included in Article 19, for, although clumsily drafted, that Article lays down very definitely that, where it is “*évident*” that any of the three types of error there specified is present, the name in question *must* be emended. It will, I think, be generally agreed that the position in regard to this matter is today profoundly different: (i) The experience of fifty years has shown very clearly that the hopes of our predecessors that the emendation of names was a process that could be effected without difficulty have proved to be misplaced; (ii) There has been a very marked reduction in the number of zoologists possessing the special knowledge required for the purpose of determining whether and, if so, in what respect, any given name ought to be emended; (iii) There has been a very great increase in the number of names published and therefore in the number of names which must be subjected to examination under Article 19 before they can be definitively accepted; (iv) Within the total number of names published, the number of names devised by zoologists possessing little or no knowledge of Latin or Greek has enormously increased and with it the number of names which cannot possibly be regarded as having been correctly formed. But it is not only by reason of the increase in the volume and complexity of the problem involved in the emendation of names that the situation today is essentially different from what it was half a century ago. For, as it seems to me, the present trend of opinion among zoologists and palaeontologists is definitely in the direction of a greater desire for stability in nomenclature and consequently for a reduction in the scope to be given for emendations on abstruse etymological grounds. It appears to me therefore that any formula for the revision of Article 19 put forward for consideration by the Copenhagen Congress in 1953 ought to be weighted in this direction, if it is to secure general acceptance by the zoologists of today, and even more, by the zoologists of tomorrow.

9. Need for ensuring that changes made in Article 19 do not lead to extensive changing of names in current use: The first aspect of the present problem to which the general principle suggested in the preceding paragraph is immediately applicable is that which is concerned with the measures to be taken to ensure that the introduction of reformed provisions governing the emendation of names does not give rise to an extensive changing of names in current use. That special action should be taken in this matter is clearly essential, since, to the extent that the new provisions are more restrictive than the present provisions, some of the emendations legitimately made under the existing Article 19—and now in universal use—would cease

to be correct, unless special action were taken to prevent this from happening. It is not easy however to devise a suitable provision for this purpose; there are two reasons for this: First, there are many thousands of names for which emendations have been published but which have never been generally accepted, although technically many of them are just as much justified as are the emendations of other names which are in general use. Second, Article 19 is so obscurely drafted and the wording employed is open to such varied interpretation that, except in a very narrow range of cases, it must always be a matter of opinion whether a given emendation already published does or does not fulfil the requirements laid down by that Article. It would therefore not be possible for the new Article to provide that no emendation legitimately made under the existing Article should be invalidated. Nevertheless, some saving clause must be devised if the very numerous emendations in current use are to be preserved. It seems to me that the only way of securing that currently accepted emendations are not invalidated as the result of the introduction of the revised scheme will be to include in that scheme a provision that, apart from emendations belonging to one or two limited classes, which it is suggested should be subject to automatic emendation, (a) the initial assumption should be that the original spelling of the name concerned is correct, but (b) that, where an emendation has already been published, it should be open to specialists in the group concerned to make application to the International Commission on Zoological Nomenclature for a ruling that that emendation be accepted. I suggest further that it should be an instruction to the Commission, when considering applications submitted under the procedure outlined above, to pay regard to the need for maintaining stability in nomenclature rather than to niceties of an etymological or philological character in cases where these considerations come into conflict with one another. The general effect of the proposal submitted above will no doubt be in some cases to accord formal recognition to names which are either misspelt or otherwise incorrectly formed, but the disadvantage so involved would, I believe, be far outweighed by the advantages to be obtained from the adoption of the generally accepted form of the name in question. The application of the general principle suggested above to the different aspects of the problem involved in the emendation of names is discussed separately later in the present paper in relation to each of the various classes of case concerned.

10. Question of the desirability of applying different tests for determining the acceptability of emendations published before and after the introduction of the revised scheme: In paragraph 9 above we have considered the difficult question of the procedure to be adopted for dealing with emendations made prior to the introduction of the new scheme. We have now to turn to the considerably less difficult but none the less complex question of the provisions to be inserted in the new Article relating to emendations published after the introduction of the new scheme. In the earlier portion of the present note I have expressed the belief that for the reasons there explained it will be found that the general—or at least the majority—view of present-day zoologists is in favour not only of more clearly defined provisions than those in the existing Article 19 but also of a restriction in the scope of those provisions. The merits of various possible provisions are

discussed in the following paragraphs. At this point, however, I desire to put to specialists a preliminary point which it appears to me is of some importance. This is the question whether it would not be wise to apply somewhat different provisions to emendations published after the introduction of the new scheme (*a*) for names published prior to the date of introduction of the new scheme and (*b*) for names published after that date. The reason why I put forward this suggestion for consideration is that as regards names falling in Class (*a*) above, it will, it seems to me, be desirable to take account not only of the technical correctness of a given name (as judged by whatever standards it may be decided to adopt) but also of the extent to which usage has given an advantage to the original spelling of the name concerned. In the case of names falling in Class (*b*) the question of usage does not arise and it would be practicable and perfectly justifiable to apply stricter tests in respect at least of those classes of case where it would be possible to lay down rules of an absolutely definite character which would provide a ready basis for the correction of a defectively formed name. Such a distinction would have the advantage on the one hand that it paid full regard to the claims of accepted usage and the need for promoting stability in all cases where those considerations were relevant, while on the other hand securing a higher standard in the formation of names in those cases where this object could be attained without prejudice to the principle of stability. A distinction such as that suggested above would be practicable only in respect of part of the field to be considered. At the present point therefore I do not put forward any definite suggestion for consideration in regard to this matter, but I propose to revert to it later where, as it seems to me, this question becomes directly relevant.

11. Problem of how to determine whether a given spelling constitutes an error which renders the name consisting of that word subject to emendation: As we have already noted (paragraph 5 above), the present Article 19 provides for the emendation of a name only when the presence of one or other of three specified categories of error is "évident"; in the foregoing paragraph I have drawn attention to the grave disadvantages arising out of the subjective element introduced into Article 19 by the use of the word "évident" and have suggested that the Article which will replace the existing Article 19 should be drafted in terms related exclusively to ascertainable objective facts. If this view proves to be generally acceptable, there will be no need to examine the arguments which have been advanced at different times both by the draftsman of the "Discussion" portion of the Commission's early *Opinions* and also by individual specialists commenting upon those *Opinions* in regard to the meaning to be attached to the expression "à moins qu'il ne soit évident que ce nom renferme . . .," as used in Article 19, for under the plan which I have suggested this objectionably subjective provision would find no place in the revised Article; equally it is not necessary to give consideration to the clarification of the expression "évident" adopted by the Thirteenth International Congress of Zoology in Paris in 1948 as a stopgap provision, pending the thorough revision of this Article (1950, *Bull. zool. Nomencl.* 4: 142—Conclusion 15(2)(a)). A revised Article drafted in the manner now suggested would be applicable to a smaller range of cases than the existing Article 19 as interpreted by some authors, but if this is so, it will

be in harmony with the—as I believe—general desire that the scope for permissible emendations should be restricted in the interests of nomenclatorial stability. All names which failed clearly to fall within the provisions (whatever they might be) that were included in the new Article would be excluded from emendation thereunder.

12. Problem of the categories of error to be accepted as being subject to emendation: We may now turn to consider what are the classes of error which it is desirable that the new Article should recognise as providing grounds for the emendation of names. As we have already noted (paragraph 5 above) the present Article 19 recognises three categories of error as providing legitimate grounds for the emendation of names. These categories are: (1) “faute de transcription”; (2) “faute d’orthographe”; (3) “faute d’impression.” Broadly, all the types of error which we have to consider may be regarded as falling within one or other of the foregoing categories. It will be convenient therefore to examine the various classes of error with which we are concerned under each of the foregoing broad headings. Before we do so, however, we must note that there has been much difference of opinion among specialists as to the meaning to be attached to the first and second of the three expressions quoted above (differences which have been fostered in part by the defective or ambiguous versions given for those expressions in the English and German translations published in 1905 simultaneously with the substantive French text). Great care will need to be taken in drafting the revised provisions which are to replace the existing Article 19, to avoid ambiguities by employing phraseology, the precise meaning of which is beyond possibility of question.

13. Prime importance of the “Official Lists” and “Official Indexes” as a means of stabilising names which have been validly emended or for which invalid emendations have been rejected: So far we have been mainly concerned with the nature of the tests to be applied in different sets of circumstances for determining whether and, if so, by what procedure and in what way a given scientific name shall in future be emended on the ground that, as originally published, that name was defective in form. There is however another important question which needs to be considered in relation to the emendation of scientific names. This is how to ensure that, once it has been established whether a given name should or should not be emended, the doubts regarding the spelling of the name in question engendered by the arguments advanced on the question whether emendation should be permitted should be dispelled as rapidly as possible. It is here that the decisions taken in Paris in 1948 by the Thirteenth International Congress of Zoology for the purpose of promoting uniformity and stability are of special importance. The decisions in question are twofold: first, that, whenever the Commission takes a decision regarding a valid name which is accepted by specialists as the oldest available name for the taxonomic unit concerned, that name shall be placed on the *Official List of Generic Names in Zoology* or, as the case may be, on the *Official List of Specific Trivial Names in Zoology*, and that, whenever it takes a decision regarding an objectively invalid name, that name shall be placed on the appropriate *Official Index of Rejected and Invalid Names* (whether

generic names or trivial names) (1950, *Bull. zool. Nomencl.* **4** : 267-268, 270-271, 334); second, that the *Official Lists* and *Official Indexes* should be integrated into the *Règles* themselves by being incorporated therein as schedules (1950, *ibid.* **4** : 333-334). These decisions, being general in character, will apply to all decisions taken by the Commission in regard to the emendation of names and, in consequence, names which have been validly emended will automatically be placed in their emended form on the appropriate *Official List* (except on the rare occasions on which the Commission is called upon to give a ruling on the question of the emendation of a name which is not regarded by specialists as the oldest available name for the taxonomic unit in question), while every version of a name ruled by the Commission to be an "invalid emendation" will be similarly placed on the appropriate *Official Index*, together with all original spellings of names where the Commission rules in favour of the emendation of the name in question. Thus, the mechanism provided by the *Official Lists* and *Official Indexes* will be of especial value in restoring uniformity of nomenclatorial practice, where this has been disturbed by arguments among specialists whether particular names should be emended and, if so, in what way.

PART 2. SUGGESTIONS FOR A COMPROMISE SCHEME DESIGNED TO SECURE THE WIDEST POSSIBLE MEASURE OF SUPPORT

(a) Need for a broadly based compromise scheme commanding the widest possible measure of support

14. Need for a scheme commanding the widest possible measure of support : I recognise that the task of devising a scheme for the clarification and reform of the provisions in the *Règles* relating to the emendation of names is of quite exceptional difficulty, (a) because the existing provisions (Article 19) have been interpreted by different authors in such very different ways, and (b) because of the differences in outlook which in this matter separate classically trained and other zoologists from one another. In a case of this kind the object must be to devise a scheme which, while not conceding all the points sought by those who hold either of the extreme points of view, nevertheless embodies all the features of each school of thought that are capable of being reconciled with one another. In other words, what is required is a compromise scheme which by being as broadly based as it is possible to make it will secure the maximum degree of support from all quarters. Inevitably, any such compromise involves considerable sacrifice and calls for considerable effort on the part of those whose views are not met in full. Nevertheless, such a compromise is clearly essential in the present instance, for without it the

only alternatives are (1) to leave Article 19 in its present indeterminate condition, a course which everyone agrees could lead only to further instability and confusion in nomenclature, or (2) for one school of thought or the other to seek to impose its point of view in its entirety upon all other workers, a course which would be peculiarly undesirable in a field such as zoological nomenclature where the only sanction for the *Règles* is that provided by the measure of support accorded by the general body of workers in zoology and palaeontology.

15. Outline of a possible compromise scheme suggested : The object of the present paper is to elicit the opinion and advice of interested specialists on the form which the revised provisions relating to the emendation of names should take. In presenting the various aspects of the problem involved, it has seemed to me that this might most usefully be done if I were to link together the various questions which will need to be settled in such a way that the suggestions submitted for consideration would constitute the outline of a compromise scheme based on the principles set out above. In drawing up the following tentative suggestions, I have paid regard also (1) to the need for devising a scheme which will involve the minimum interference with existing nomenclatorial practice, (2) to the, as I believe, growing desire for securing means for determining without possibility of argument whether any given name is to be emended and, if so, in what manner, and (3) thereby reducing to the minimum the scope for argument on etymological and philological questions which fewer and fewer zoologists today possess either the qualifications or the inclination to discuss. If in its main outlines the compromise scheme now suggested were to meet with general approval in the sense that it was looked upon as offering the best means for harmonising opinion on the subject of the emendation of names, alternative solutions would be possible as regards several of the component parts of the scheme and where this seems to me to be the case, I have indicated those alternatives for the purpose of obtaining the views of interested specialists as to which should, in their opinion, be preferred.

(b) Need for a clear definition of the class of spelling changes covered by the expression "emendation" and matters incidental thereto

16. Confusion arising from the present lack of a definition of the meaning to be attached to the expression "emendation" : One of the difficulties which at present arise in any discussion of the problem of the emendation of names is the lack of any definition of the meaning to be attached to the expression "emendation." In consequence, that expression has been applied indifferently (1) to spellings of names which the authors concerned have stated are deliberate departures from the spellings used for those names by their original authors and (2) also to spellings of names which differ from those used by the original authors of the names concerned but which were published without any intimation that the original spelling was

being deliberately changed for the purpose of emending the names in question. This lack of definition has led to some authors holding the view that only names belonging to class (1) above are properly to be regarded as emendations falling within the scope of Article 19, while other authors have taken the line that any spelling which differs from the original spelling of a given name is to be regarded as constituting an emendation of that name, though (naturally) not necessarily as a justified emendation. These differences in the interpretation of the expression "emendation" have inevitably led to confusion and to instability. Clearly, therefore, this is a defect which should be remedied in the coming revision of the rules relating to the emendation of names.

17. Proposed definition of the expressions "emendation" and "erroneous spelling change": In a paper published in 1947 (*Science* (n.s.) **66**: 315-316) a sub-committee of the Smithsonian Institution Committee on Zoological Nomenclature recommended that the expression "emendation" should be restricted to those changes in the spelling of a name where the author making the change made it clear that the change was intentional or where it was demonstrable from the original publication that the change was of this kind; all other changes should, the sub-committee suggested, be known as "errors"; the sub-committee further suggested that, where it was doubtful whether any spelling change was intentional or not, that spelling change should be treated as an "error" and not as an "emendation." The essential feature of the proposal so submitted by the Smithsonian Sub-Committee provides a clear cut means for overcoming the difficulties to which reference has been made in the preceding paragraph and will, I feel, win general approval from zoologists. Turning to the details of the proposal submitted, there are two points which call for consideration. First, it may be felt—and this is the view which I have provisionally reached myself—that it would be better to limit the definition of the expression "emendation," so as to include within its scope only those cases where the author publishing a spelling for a name which differs from the original spelling of that name himself expressly makes it clear that the spelling change is intentional. In other words, I would suggest the exclusion, from the definition, of words which would bring within its scope those cases where an author does not expressly make it clear that he is deliberately altering the spelling of the name but where it is demonstrable from the original publication that this is what he was doing. My reason for making this suggestion is that in some cases the subjective character of the test proposed would be calculated to give rise to argument whether a given spelling change did or did not constitute an "emendation." Moreover, this provision does not seem to be necessary, for, if workers in the group concerned were of the opinion that the name in question should be emended in the manner in question, there would, no doubt, be no difficulty in finding a later paper, the author of which adopted the same spelling change, at the same time making it clear that he was doing so intentionally. The second point which I put forward for consideration is that the expression "error" suggested by the Sub-Committee is too broad in its scope, for it does not convey any indication of the subject with which it is concerned. While I entirely agree that spelling variants which are not clearly marked by their authors as being intentional should be known by a special term, I do not feel that the expression "error"

would be sufficiently self-explanatory for this purpose and I suggest that in its place the expression "erroneous spelling change" should be adopted. Under the foregoing plan, every spelling variant would be either an "emendation" or an "erroneous spelling change"; the former would be defined as "any change in the spelling of a previously published name, which the author of that spelling change makes clear is intentional," while the latter would be defined as "any change in the spelling of a previously published name, other than an emendation."

18. Proposed definition of the expressions "valid emendation," "invalid emendation" and "erroneous original spelling": The adoption of the definitions of the expressions "emendation" and "erroneous spelling change" suggested in the preceding paragraph would define clearly those types of spelling change which alone are to be taken into account in considering the question of the emendation of a scientific name. But the definition suggested for the first of these expressions cannot provide guidance as to the nomenclatorial status to be accorded to any given emendation, for clearly that status will vary according to whether the emendation in question is made in accordance with the provisions of the *Règles* or is in contravention of those provisions. As will be seen in the following paragraph, it will be necessary to accord a different status to each of these types of emendation. For this purpose, it will be desirable that the *Règles* should contain precise definitions of the expressions "valid emendation" and "invalid emendation." It is suggested that a "valid emendation" should be defined as being "an emendation made in accordance with any of the methods prescribed for the emending of names" and that an "invalid emendation" should be defined as being "any emendation, other than a valid emendation." In the immediately following paragraph consideration is given to the position of "valid emendations" and "invalid emendations" respectively in relation to the Law of Homonymy and it will be necessary then to consider also the position of an original spelling when later that spelling is rejected in favour of a "valid emendation." For this purpose it will be convenient to prescribe an expression to denote this concept; it is suggested that the expression to be adopted should be "erroneous original spelling."

19. Nomenclatorial status to be accorded to a "valid emendation," to an "invalid emendation" and to an "erroneous original spelling": Everyone will, I think, agree that the greatest confusion would be liable to arise if, when a "valid emendation" was made to any given previously published name, that name were to lose its previous priority and to rank only as from the date on which the "valid emendation" was published for it; for under such a system it would be possible to displace altogether any well-known name that was defectively formed whenever some other name for the taxonomic unit concerned was published between the date on which the defectively formed name was published and the date on which a "valid emendation" of that name was published. For the purpose of preventing unwarrantable nomenclatorial disturbance of this type the International Congress of Zoology (see 1950, *Bull. zool. Nomencl.* 4: 68) has ruled that, where a name is validly emended that name so emended is to rank for priority as from the date on which the name in question was originally published in

an incorrect form and is to be attributed to the author by whom it was originally so published. In other words an emendation which is a "valid emendation" has no separate nomenclatorial existence of its own, the position being that the "valid emendation" simply replaces the original defectively formed name and acquires the priority attaching to that name and is attributable to the author by whom the name was originally published in an incorrect form. While it is not to be supposed that anyone would wish to see any alteration in the foregoing provision relating to the status of a "valid emendation," it does not follow at all that it would be desirable to accord a similar status to an "invalid emendation." Two courses are possible: (1) to lay it down that an "invalid emendation," like a "valid emendation," possesses no separate existence of its own; (2) to prescribe that every "invalid emendation" is to rank for priority as from the date upon which it was published and it is to be attributed to the author by whom it was published. Under the second of these courses, every "invalid emendation" would rank as a separate name. As such, an "invalid emendation" would be available for adoption as the name of the taxonomic unit for the name of which it was originally published as an emendation, where the original name in question was itself later found to be invalid as a junior homonym of some other name, provided that the difference in spelling between the original name and the "invalid emendation" later published for it was not so slight as to render the two names liable to be treated as homonyms of one another under the Law of Homonymy. Under this proposal an "invalid emendation" would rank for all purposes as an independently published name and would accordingly render invalid any subsequent use of that name either for some other genus or, as the case might be, as the trivial name of some other species in the same genus. The portion of this proposal which is concerned with the status of an "invalid emendation" (i.e., the proposal that such an emendation should render, in the case of a generic name, any subsequent use of the name in its invalidly emended form invalid as a junior homonym, and, in the case of a trivial name, have a corresponding effect within the genus concerned) does no more than restate the existing legal position (1950, *Bull. zool. Nomencl.* 4: 163); the portion of this proposal which is novel is that under which an "invalid emendation" would rank for priority as from the date on which it was published (and not from the date of publication of the earlier name so proposed to be emended) and would be attributed to the author by whom it (the invalid emendation) had been published. This feature, which constitutes an essential part of the proposal that an "invalid emendation" should be granted a nomenclatorial status distinct from that of the name which it had been intended to emend, has the advantage that it emphasises the independent status proposed to be accorded to an "invalid emendation." It is recommended that the foregoing status should be accorded to this class of name. Finally, we have to consider what status, if any, should be accorded to an "erroneous original spelling." We are concerned here with the status of a name which, as applied to one taxonomic unit, has been rejected as incorrect and has been replaced by an emendation. In this context therefore an "erroneous original spelling" clearly can possess no status in nomenclature, since otherwise it would take precedence over the emendation by which it was replaced. It would be quite unreasonable to accord any different status to an "erroneous

original spelling" in relation to other names under the Law of Homonymy. It is accordingly suggested that the scheme should provide that an "erroneous original spelling" possess no status in zoological nomenclature.

20. Nomenclatorial status to be accorded to an "erroneous spelling change": Under the definition suggested in paragraph 17 above, the spelling variants in future to be known as "erroneous spelling changes" would include, in addition to a few spelling changes which were probably intentional but which the author concerned did not indicate as such (and which therefore do not rank as "emendations"), a large number of accidental spelling variants made through ignorance as to how the name in question was originally spelt, or through carelessness on the part of the author, editor or printer concerned. Naturally in most cases the difference in spelling between (1) an "erroneous spelling change" and (2) the spelling used when the name in question was first published will be slight, often consisting of a difference of a single letter only. In some cases, however, an "erroneous spelling change" may constitute a word totally distinct from the original name, for it has occasionally happened that, as the result of some extraordinary lapse of memory or lack of concentration, an author, when intending to cite some previously published name, has in fact written down some word which has never been published as a name at all, as Walker did in 1851 when, intending to refer to the Dipterous genus *Myolepta* Newman, 1838, he wrote down not the word *Myolepta* but the unconscious inversion of that name, *Leptomylia*. The Smithsonian Sub-Committee to which reference has already been made (paragraph 17 above) recommended that all "erroneous spelling changes" (termed "errors" by the Sub-Committee) should be treated as possessing no status in zoological nomenclature. It is part of this recommendation that an "erroneous spelling change" (e.g., *Leptomylia* as published by Walker in 1851) should not render invalid as a junior homonym any later use of the same word as applied to some other taxonomic unit. This seems to me the most logical course to follow in relation to "erroneous spelling changes" and this is provided for in the definition which I have suggested should be adopted for the foregoing expression.

21. Suggested adoption of a saving clause to render possible the acceptance of an "erroneous spelling change" in cases where such a variant is in current use: It will, I think, be found that in certain cases a taxonomic unit is currently known by a name spelt in a manner different from that in which it was originally published, although no emendation (in the sense in which it is suggested in paragraph 17 above that that expression should in future be defined) is not known ever to have been published. In other words, the currently accepted spelling in such a case is an "erroneous spelling change" and not an "emendation." Such a case could hardly arise except in the case of names published long ago, where the currently accepted spelling is based upon conventional usage and not upon direct reference to the book in which the name in question was originally published. As will be seen, it is suggested later in the present paper that, in the case of emendations published prior to the introduction of the revised scheme, the question whether any such emendation should be accepted as a valid emendation should, except in certain limited classes of case, be made subject to a decision on that case

by the International Commission on Zoological Nomenclature. In the special—and, no doubt, limited—class of case with which we are here concerned, it would seem a pointless act of pedantry to insist that, where the currently accepted spelling of a name (being a spelling different from the original spelling) is, or appears to be, not an “emendation” but an “erroneous spelling change,” authors desiring to obtain authority from the International Commission for the continued use of the currently accepted spelling should be required, as a preliminary to the submission of an application to the Commission, themselves formally to republish the name in question spelt in the currently accepted manner in terms which would bring that spelling variant within the definition proposed to be given to the expression “emendation.” Such a requirement would appear to be all the more ritualistic in view of the fact that, if sufficient time and trouble were to be devoted to the barren task of searching the literature, it might frequently be found that in some overlooked publication an author had in fact used the variant spelling in question in conditions which had elevated that variant from the status of an “erroneous spelling change” to that of an “emendation.” It is accordingly suggested that the revised scheme should include a provision authorising the International Commission on Zoological Nomenclature (1) to take into consideration an application for the acceptance of an “erroneous spelling change” in like manner as an application for the acceptance of an “emendation,” where it is satisfied that current usage is such as to justify the consideration of such an application, and (2) after having considered such a case in consultation with interested specialists, to direct that the “erroneous spelling change” concerned be treated as a “valid emendation,” where it considers this necessary in the interests of nomenclatorial stability and the avoidance of confusion.

(c) Errors in transliterating words from languages using alphabets other than the Latin alphabet

22. Ambiguity of the expression “faute de transcription” as used in Article 19: It has sometimes been argued that the expression “faute de transcription,” as used in Article 19, means no more than a spelling mistake arising out of an error in copying on the part of the original author of the name; but this argument appears to be quite untenable in view of the fact that, if this were the meaning which in the present context properly applies to this expression, the expression “faute de transcription” so used would be identical in meaning with the expression “faute d’orthographe,” the immediately following expression used in Article 19. Thus, if the foregoing interpretation were correct, we should be faced with one more example of the meaningless use of repetitive phrases which, as noted by the Paris Congress (1950, *Bull. zool. Nomencl.* **4**: 195), had till then marred other parts of the *Règles*. In opposition to the foregoing interpretation of the expression “faute de transcription,” other zoologists have advanced the view that, as used in Article 19, this expression has a meaning identical with that which would have been conveyed if in its place there had been used the expression “faute de transliteration.” In other words, these zoologists have argued that in this

context this expression refers to errors of spelling committed by authors when giving a Latinised form to words belonging to languages employing alphabets other than the Latin alphabet. In actual fact, the latter interpretation is undoubtedly correct, for, as reference to the Substantive French text of the *Règles* shows, the set of recommendations for the transliteration into the Latin alphabet of Greek words given in Section "F" of the *Appendice* bears the title "Transcription des mots grecs," thus showing that, as used in the *Règles*, the French word "transcription" has a meaning identical with the English word "transliteration"; it is probable that the controversy which has occurred regarding the meaning of this portion of Article 19 would never have arisen if it had not been for the unfortunate use in the English translation of the slightly ambiguous word "transcription." Incidentally, we may note at this point that within six years of the first publication of the *Règles* (in 1905) the foregoing interpretation of this part of Article 19 was laid down (though without direct reference to the substantive French text) by the International Commission on Zoological Nomenclature in its *Opinion* 36 (1911, *Smithson. Publ.* **2013**: 84), where the Commission directly synonymised the words "transcription" and "transliteration" ("The original publication of . . . make it evident that an error of transcription (*seu* transliteration) is present . . .").

23. Provisions in the "Appendice" to the "Règles" relating to the transliteration into the Latin alphabet of words derived from languages using other alphabets: At the time when the *Règles* were adopted, it was still unusual (except in the case of scientific names based upon place-names or upon the names of persons) for names to be formed otherwise than from Latin words or from Latinised versions of Greek words. There were many names of this latter type and it was to deal with them that the Berlin Congress devoted the special Section (Section "F") of the *Appendice* to the *Règles* to a series of rules for the transliteration of words from the Greek, to the Latin, alphabet, to which reference has already been made. It was not considered necessary to provide rules for the transliteration into the Latin alphabet of words belonging to, or derived from, any other alphabet. All that was thought to be required in respect of such words was to provide (in Section "G" of the *Appendice*) rules for the transliteration to be adopted in cases of this kind where they arose in connection with scientific names based either upon place-names or upon the names of persons. Unfortunately, from the point of view of clarity, the Berlin Congress omitted to include any provision to make it clear whether these two sections (Sections "F" and "G") of the *Appendice* to the *Règles* were to be regarded as containing mandatory provisions or whether they were to be looked upon as doing no more than offering advice to zoologists as to what constituted good practice in this matter. The result of this omission inevitably led to the greatest diversity in subsequent practice. Classically-trained zoologists argued that the effect of Section "F" in the *Appendice*, when read in conjunction with Article 19, was to render obligatory the emendation of all scientific names consisting of words of Greek origin, when these were defectively transliterated, and large numbers of such emendations have been published since the adoption

of the *Règles* fifty years ago. Other specialists however took the view that all the provisions in the *Appendice* to the *Règles* were permissive (i.e., non-mandatory) only and therefore that it by no means followed that every name consisting of a defectively transliterated Greek word should be emended. The Commission itself was not consistent in its attitude to this question, for, although (as noted above) it accepted (in *Opinion* 36) the view that the word "transcription," as included in the expression "faute de transcription" was identical in meaning with the word "transliteration" and consequently emended the three names dealt with in that *Opinion*, it did not always apply this principle when giving rulings as to the interpretation of Article 19. The ambiguity regarding the relationship of the provisions in the *Appendice* to those in the actual Articles of the *Règles* was finally removed by the decision by the Thirteenth International Congress of Zoology at Paris in 1948 to insert an Article in the *Règles* to make it clear that the provisions in the *Appendice* are not mandatory but are "in the nature of recommendations as to good nomenclatorial practice" (1950, *Bull. zool. Nomencl.* **4**: 73). Accordingly as matters now stand, Article 19 and Section "F" of the *Appendice* (now converted into a Schedule to the *Règles*) do not require that every defectively formed name of Greek origin is to be emended.

24. Conflicting approaches to the problem constituted by names containing errors of transliteration: There has in the past been wide diversity of view among zoologists on the question of the extent to which names containing errors of transliteration should or should not be subject to emendation. In part, these differences of opinion arose from divergent views regarding the interpretation properly to be given to the provisions in the existing Article 19; in part, to differences in outlook as between those zoologists who possessed a training in the Classical Languages on the one hand and on the other hand those who did not. The school of thought which holds that every error of transliteration should at once be emended is well illustrated by the scholarly "Index of Palaeozoic Corals" published by the British Museum in 1940 in which Lang, Smith and Thomas emended every name which, in their opinion, contained an error of any kind, nearly 70 such emendations being made among the names of the 564 genera recognised by those authors; some of the corrections so made involved the publication of names so different in appearance from the counterpart names as originally published as to appear to the eye of the non-classically trained zoologist as entirely new names; as examples of the emendations so made we may cite *Aenigmatophyllum*, an emendation of *Enygmophyllum*, Fomichev, 1931; *Polydisclusma*, an emendation of *Polydilasma* Hall, 1851; *Strobilelasma*, an emendation of *Strobilasma* Scheffer, 1933. At the other end of the scale may be cited the view expressed in 1947 (*Science* (n.s.) **66**: 315-316) by the Sub-Committee of the Smithsonian Institution Committee on Zoological Nomenclature, to which reference has already been made (paragraph 17 above), which urged that "incorrect transliteration" should not be recognised as an "error" subject to emendation. As might be expected the general practice of zoologists appears to lie between these two extremes, some zoologists inclining in the direction of the view represented by Lang, Smith and Thomas in the work cited above, others inclining towards that held by the Smithsonian

Sub-Committee. In a case of this kind, any revised provision, if it is to win the widest possible degree of support, must take account of both these points of view and must recognise also the existence of a large body of intermediate opinion. In other words, if a high degree of support is to be secured, the exponents of each of the extreme points of view will need to make some concession to the point of view of the other. At this point it is relevant to note that there is a very important consideration to which perhaps insufficient attention has been given in previous discussion of the problem of emending names. This is the need for devising a scheme which will involve the minimum of change in current nomenclatorial practice, especially in relation to well-known names. From this point of view neither of the extreme schools of thought can be regarded as offering an acceptable solution, for neither pays regard to the need for avoiding undesirable name-changing. The ultra-classicists, taking their stand upon etymological propriety, would be prepared to change the spelling of any name, the formation of which did not come up to the requisite standard; the anti-classicists, taking their stand upon the need for maintaining the original spelling of a name, without regard to errors of transliteration, would be prepared to witness the reversion to the original (defective) spelling of the large number of names—many in widespread use—which, when originally published, contained errors of transliteration but which have later been emended, the emended and not the incorrect original spelling being the spelling now in current use. This therefore seems to me to constitute one of those aspects of the problem where it is desirable from every point of view that the revised provisions to be inserted in *Règles* should represent a compromise, to the attainment of which each of the opposing schools of thought will have made some contribution for the sake of general agreement. It is always difficult for those who feel strongly on any given subject themselves to take the lead in suggesting a basis for a possible compromise. I have come to the conclusion therefore that it might facilitate the discussion of this part of the subject and advance the prospects of securing a generally acceptable settlement if, as Secretary to the International Commission on Zoological Nomenclature, I were at this point to take the initiative by submitting for the consideration of those interested the outlines of a scheme for dealing with the problem of errors of transliteration, which steers a middle course between the more extreme schools of thought in regard to this subject. It is with this object in view that in the following paragraphs I set out the main features of a scheme which I hope may commend itself to zoologists generally. The problem presented by scientific names based upon the names of persons and places is excluded from the immediately following discussion, being reserved for separate treatment later in this paper (see paragraphs 38-45 below). The scheme now suggested is designed on the one hand to prevent the perpetuation of gross errors of transliteration but on the other hand to recognise both the decline of knowledge of, and of interest in, the Classical Languages among zoologists and, in addition, the desire, now much stronger than formerly, to promote stability in nomenclature by avoiding unnecessary name-changing. The scheme now tentatively submitted represents a deliberate effort to harmonise existing differences of opinion by means of a compromise plan designed to secure the widest practicable measure of support from zoologists of all shades of opinion,

25. Differences between the problems arising in connection with the emendation of names containing errors of transliteration according to the relative dates of publication of the original incorrectly formed name and the emendation published therefor: In considering the provisions which might appropriately be inserted in the *Règles* for emending the spelling of names consisting of words incorrectly transliterated from languages employing an alphabet other than the Latin alphabet, it is desirable to consider separately the three groups into which such emendations fall, when looked at from the point of view of the relative dates of publication of the original incorrectly formed name and of the emendation published therefor. The groups in question are: *Group No. 1*, which comprises all names for which emendations have already been published or will have been published prior to the coming into operation of the revised scheme; *Group No. 2*, comprising names published prior to the coming into operation of the scheme for which emendations are published after that date; *Group No. 3*, comprising all names published after the coming into operation of the revised scheme. The problems arising in connection with these three groups of names are discussed separately in the immediately following paragraphs. In that discussion I have excluded from consideration the special problems which arise in connection with scientific names based upon the names of persons and places, when the words of which those names are composed are words transliterated into the Latin alphabet from some other alphabet and the method of transliteration used is (or is believed to be) incorrect. As already explained, these special problems are discussed at a later point in the present paper (paragraphs 38-45 below).

26. Emendations on the ground of errors of transliteration published, prior to the coming into operation of the revised scheme, for scientific names, other than names consisting of, or based upon, the names of persons or places: In the immediately preceding paragraph (paragraph 25) I have expressed the opinion that, except in the special case of scientific names based upon certain classes of personal names and place names (the position as regards which is discussed in paragraphs 38-44 below) it is not possible to devise any rule of a general character which can be applied automatically and which would secure the retention of the numerous emendations now currently accepted by specialists in the groups concerned, while at the same time providing for the rejection of the much larger number of emendations that have been published but have not been accepted by specialists and are not in current use. In these circumstances the only means by which the desired end can be secured is through the adoption of a provision which would make it the duty of the International Commission on Zoological Nomenclature to decide, subject to certain prescribed conditions, which of the emendations published before the entry into operation of the revised scheme on the ground that the names concerned consist of words containing errors of transliteration, are to be accepted and which rejected. It is accordingly suggested that the revised scheme should provide that, so far as concerns any scientific name, not being a name consisting of, or based upon, the name of a person or a place, for which, prior to the coming into operation of the scheme,

an emendation has been published on the ground that the word of which that name consists has been incorrectly transliterated into the Latin alphabet from some other alphabet, the original spelling is to be retained, save and in so far as the International Commission on Zoological Nomenclature, on receipt of an application by specialists, may direct that the emendation so published or, if two or more emendations have been published, one of those emendations is to be accepted. In order to promote the general purpose which I have suggested should underlie the revised scheme, namely that the emendation of names should be restricted to within much narrower limits than formerly was considered desirable by many workers, the portion of the scheme dealing with the foregoing matter should include a provision requiring the Commission, when reaching its decision, to pay regard not so much to considerations of an etymological or philological character as to the nature of current nomenclatorial practice and the need for promoting stability in nomenclature. Further, in order to ensure so far as possible that the fullest information is available to the Commission in regard to the nature of current nomenclatorial practice, before it reaches a decision on an application of this class, it is suggested that the scheme should require the Commission to give public notice of any such application in like manner as though it were an application involving the possible use of its plenary powers; for the sake of emphasising the same consideration, it would, it is suggested, be well to require the Commission, when deciding cases of this class, to do so in the light of the information contained in the original application and of any other information subsequently elicited. It is unfortunately true that the introduction into the *Règles* of a provision which made the validity of previously published—and currently accepted—emendations contingent upon a decision to be obtained from the Commission, although (as it seems to me) an inevitable feature of any scheme which is to be free from ambiguity and yet also to provide for the acceptance of some but not all of the emendations already published, might be held by any person who was a confirmed name-changer to justify the immediate rejection of a large number of emendations (made on the ground that the names concerned contained, when first published, errors of transliteration) which are now in universal use, on the excuse that as yet no decision to the contrary had been taken by the International Commission. The risk involved closely resembles the risk of well-known names being hastily abandoned on the discovery of some older but long-overlooked name for the taxonomic unit concerned, a matter to which careful consideration was given in Paris in 1948 both by the Commission and by the International Congress of Zoology. It was then decided (1950, *Bull. zool. Nomencl.* 4: 234-236) that, in order, so far as possible, to ward against this latter risk there should be inserted in the *Règles* a *Recommandation* deprecating hasty action without reference to the Commission. On the analogy of the action so taken it is suggested that, in connection with the provision here under discussion, there should be inserted in the *Règles* a *Recommandation* urging that an emendation that is in current use at the time of the coming into operation of the revised scheme should not be abandoned in favour of the original spelling until the question whether the emendation in question is to be accepted or, as the case may be, rejected has been submitted to, and decided by, the International Commission,

27. Emendations, on account of errors of transliteration, of scientific names, other than scientific names based upon the names of persons or places, where the scientific name in question was published before the coming into operation of the revised scheme but was not emended before that date: We have now to consider the position of scientific names published prior to the coming into operation of the revised scheme which contain errors of transliteration but for which no emendation has been published prior to the foregoing date. As in the case of scientific names which have already been emended, or will have been emended, on the foregoing account before the revised scheme comes into operation, it is proposed to set on one side for later consideration (paragraphs 38-44 below) the position of scientific names based upon the names of persons or places. The first point which we have to note is that, if the revised scheme were to include automatic provisions capable of being operated by zoologists without reference to the Commission, it would be essential that the *Règles* themselves (or the Schedules attached thereto) should contain precise guidance as to the method to be followed in transliterating into the Latin alphabet words normally written in some other alphabet. Such an arrangement would involve giving mandatory force to the sections of the schedule concerned which deal with the question of the transliteration of words into the Latin alphabet. At the present time the only alphabet for the transliteration of words from which recommendations are given in the Schedules to the *Règles* is the Greek alphabet. In addition, under a decision taken by the International Congress of Zoology in Paris in 1948, there will later be a corresponding set of recommendations in respect of the transliteration of words from the Cyrillic alphabet to the Latin alphabet (1950, *Bull. zool. Nomencl.* 4: 229). In respect of words transliterated from the Greek alphabet it would be possible to include in the revised scheme a provision that, after the coming into operation of that scheme, any word transliterated from the Greek, into the Latin, alphabet, which, when published as a scientific name, is transliterated differently from the manner prescribed in the Schedule to the *Règles* dealing with this subject is automatically to be corrected to such extent as may be necessary to make its spelling conform with that required by the Schedule referred to above; a similar provision could be adopted in relation to the emendation of names consisting of words transliterated from the Cyrillic alphabet, as soon as the set of rules relating to this subject has been incorporated (as agreed upon by the Paris Congress) has been added to the appropriate Schedule to the *Règles*. This system could be extended further at later dates, as and when rules relating to the transliteration into the Latin alphabet of words normally written in other alphabets, besides the Greek and Cyrillic alphabets are added to the appropriate Schedules to the *Règles*. It is necessary at this point to consider whether it is desirable that rules of this kind should be included in the revised scheme in relation to the emendation of scientific names published before the coming into operation of that scheme. The considerations which we have here to weigh are twofold in character: first, the extent to which it would be objectionable that words consisting of defectively transliterated words should be permitted to remain unemended; second, the extent to which nomenclature would be liable to undesirable disturbance if every scientific name consisting of a word defectively

transliterated from the Greek or Cyrillic alphabets that had been published prior to the coming into operation of the revised scheme was to be liable after that date to automatic emendation in accordance with rules for transliteration embodied in the Schedules to the *Règles*. My belief is that, contrary to what would have been the case if this matter had been considered fifty years ago, the general feeling of zoologists now would be against a provision which called for the automatic emendation, after the coming into operation of the revised scheme, of all scientific names consisting of transliterated versions of words normally written in the Greek or Cyrillic alphabets, whenever there was an error of transliteration in the words of which names were composed, for this would certainly give rise to a substantial amount of name-changing when the revised scheme came into operation. On the other hand, I believe also that there are some names containing errors of transliteration from the Greek and Cyrillic alphabets which have not yet been emended, and will not have been emended before the revised scheme comes into operation, which it would be the general wish of zoologists should be emended. I should, however, expect that the number of such cases would be small. Nevertheless, if the revised scheme is to be comprehensive in character, it should contain a provision for dealing with this exceptional class of case. In view of the fact that the provision required is one which would be highly selective, it would clearly be necessary that it should take the form of the grant to the International Commission on Zoological Nomenclature of a suitable discretionary power to deal individually with cases of this sort on their merits. So far, we have considered only the question of the emendation, after the coming into operation of the revised scheme, of names published before that date which consist of words transliterated into the Latin alphabet either from the Greek alphabet or from the Cyrillic alphabet, those being the only alphabets for the transliteration of words from which recommendations are given, or will shortly be given, in the appropriate Schedule to the *Règles*. But we have also to consider the question of names published in the same period which consist of words transliterated into the Latin alphabet from alphabets other than the two alphabets referred to above, where those words contain—or are believed to contain—errors of transliteration. Since in these cases the Schedules to the *Règles* contain no provisions which could form the basis upon which an automatic system of emendation could be built, any emendation of such names that might be considered necessary could be effected only through the use by the International Commission of discretionary powers expressly granted to it for that purpose.

28. In the light of the considerations discussed in the preceding paragraph, I suggest that provisions to the following effect should be included in the revised scheme: (1) After the date of entry into force of the revised scheme no scientific name, not being a scientific name based upon the name of a person or place, published before that date may be emended by any author on the ground that the word of which that name is composed or on which it is based contains an error of transliteration; (2) Where, however, specialists are of the opinion that the word of which such a name is composed contains an error of transliteration which ought to be corrected, it shall be open to them to make application to the International Commission on Zoological Nomenclature

for the name to be emended and it shall thereupon be the duty of the Commission to determine whether the name in question is to be emended and, if so, in what way; (3) The procedure to be followed in considering such an application and the principles which should guide the Commission in reaching a decision thereon should be the same as those suggested in paragraph 26 above in relation to emendations published before the coming into operation of the revised scheme.

29. Emendation, on the ground of faulty transliteration, of words, other than words consisting of, or based upon, the names of persons or places, published as scientific names after the coming into operation of the revised scheme: Now that we have considered the problem of the emendation, on the ground of faulty transliteration, of words, other than words consisting of, or based upon, the names of persons or places, published before the coming into operation of the revised scheme. (a) where an emendation has been before that date, and (b) where it is desired to emend such a name after that date, we have to turn to the question of the emendation, on the foregoing grounds, of names published after the revised scheme has come into operation. As on the preceding occasion, we have here to consider this problem in relation to two different groups of names. These groups are: (1) names consisting of words transliterated into the Latin alphabet from alphabets, for the transliteration of which no guidance is given in the Schedules annexed to the *Règles*, (2) names consisting of words transliterated into the Latin alphabet from an alphabet (e.g., the Greek alphabet), for the transliteration of words from which a set of recommendations is given in the Schedules to the *Règles*. Names belonging to the first of these groups are, as regards emendation, in a position exactly similar to that of names transliterated from the same alphabets which have been, or will have been, published before the revised scheme comes into operation. For the *Règles* contain nothing by which zoologists can determine whether the transliteration used at the time when the name in question was first published is correct or not. It follows therefore that it is not possible to introduce into the *Règles* provisions for the emendation of such names which can be operated by zoologists without reference to the International Commission on Zoological Nomenclature, and that, if provision for the emendation of such names is to be made in the revised scheme, it should take the form of making the emendation of such names subject to the same rules as those suggested (in paragraph 28 above) for the emendation, after the coming into operation of the revised scheme, of names published before that date, where emendation is desired on the ground of faulty transliteration into the Latin alphabet. When, however, we turn to the second of the groups indicated above, the position is different. For here the *Règles* do contain (in the Schedules) provisions which could be used as the basis of automatic emendation. Moreover, in the case of names belonging to this group there could be no risk of causing instability in nomenclature if mistakes of transliteration contained in such names were to be made subject to automatic correction (and the names in question subject therefore to automatic emendation). For the names in question, being new names, could not have acquired any body of usage in their incorrectly spelt form. The alternative courses of action possible are: (a) to treat all names, other than names based upon

the names of persons or places (the position as regards which is considered separately in paragraphs 38-45 below), published after the coming into operation of the revised scheme in the same way, for the purpose of emendation on the ground of faulty transliteration, irrespective of whether or not the Schedules to the *Règles* contain provisions for the transliteration into the Latin alphabet of words belonging to the languages from which the names in question are derived; or (b) to provide (as will be unavoidable if any emendation is to be permitted) for the power of emendation on the foregoing grounds to be vested in the International Commission on Zoological Nomenclature in the case of names belonging to this class which are derived from languages, for the transliteration of words from the alphabets of which no guidance is given in the Schedules to the *Règles*, at the same time providing that names consisting of words incorrectly transliterated from alphabets, for which rules for transliteration are provided in the Schedules to the *Règles* shall be subject to compulsory (automatic) emendation in accordance with the rules given in the Schedules. Either of these solutions would be satisfactory in the sense that each would give clear-cut unequivocal results, but the second has the advantage that it would secure the correction of errors of transliteration in the case of names where such correction could not lead to confusion or cause inconvenience to the non-classically trained zoologist but would at the same time be welcome to those zoologists who possess a knowledge of the Classical Languages.

(d) Spelling mistakes

30. Ambiguity of the expression "faute d'orthographe" as used in Article 19 of the "Règles": We come now to the second of the main categories of error at present recognised in Article 19 of the *Règles* as requiring emendation—the "faute d'orthographe." Before passing to consider what provisions should be inserted in the revised scheme in relation to this type of error, we must note that, although the expression "faute d'orthographe" means no more than a spelling mistake of any kind, it has often been incorrectly interpreted in the context of Article 19 as referring only to one special type of spelling mistake, namely the mistake which arises when the person writing a word inadvertently spells it in some incorrect manner—that is, the so-called *lapsus calami*. The origin of this misconception is not far to seek, for the expression "*lapsus calami*" was used incorrectly in the English translation of the substantive French text of Article 19 published in 1905. It is unfortunate that specialists should have been misled by the erroneous use of this expression in the English translation of the *Règles*, but it is extremely lucky that the expression "faute d'orthographe" and not the expression "*lapsus calami*" was used in the substantive text, for the latter expression would have been extremely unsuitable to employ in this context owing to the further subjective element which it would have imported into Article 19. If the expression "*lapsus calami*" had been used, it would have been necessary not only to consider whether a given spelling mistake was "évident" (this test owing to its subjective nature being extremely unsatisfactory), but also whether it had

been made through inadvertence or carelessness on the part of the author (a subjective test which could hardly ever have been applied with certainty). Moreover, the result would have been illogical in the extreme, for under such a provision a mistake made accidentally would have been subject to emendation, while a mistake made either deliberately or through ignorance could not have been corrected and a name comprising such a mistake could not have been emended.

31. Emendation of names containing spelling mistakes (general considerations): Many of the considerations discussed in the preceding paragraphs in relation to errors of transliteration apply with equal force to spelling mistakes committed by authors in forming scientific names. In particular (1) it will, I think, be widely agreed that with the decline in the knowledge of the classical languages among zoologists which has occurred during the last fifty years errors in the spelling of Latin words and defects in the formation of neo-Latin words do not cause the consternation which they would have a generation or so ago and therefore that the desire to emend names containing such errors is much less general than formerly, and (2) the much greater importance now attached to ensuring stability in nomenclature than that which was manifested by the architects of the *Règles* is also operating as a factor in favour of restricting the scope within which the emendation of names on etymological or philological grounds should be permitted. It is with these considerations in mind that the various aspects of the problem involved in the emendation of names consisting of misspelt words are examined in the following paragraphs. As in the discussion of the problems arising in connection with errors of transliteration, so also here the special case presented by scientific names based upon the names of persons and places is excluded for separate consideration at a later stage (paragraphs 38-45 below).

32. Suggested institution of an objective test as the basis for the automatic correction of certain classes of spelling mistake and the emendation of scientific names containing such mistakes: When considering the question of the emendation of scientific names consisting of words erroneously transliterated into the Latin alphabet from some other alphabet, we were confronted with the complication that the question of how words should be so transliterated is one which calls for a specialised knowledge which in present-day conditions it would be unreasonable to expect zoologists to possess and by the fact at present the *Règles* contain (in the Schedules) guidance for the trans-literation into the Latin alphabet of words normally written in one other alphabet only, namely the Greek alphabet. In these circumstances it was impossible to devise any objective test for the emendation of names containing errors of transliteration. Now, however, that we come to straightforward spelling mistakes, we find the position somewhat less difficult, for within a narrow field it would be possible to devise such a test. An attempt was made many years ago by the International Commission on Zoological Nomenclature to devise such a test when, for example, in *Opinion* 36 (1911, *Smithson. Publ.* **2013** : 84) it incorporated in its decision the argument advanced in the "Discussion" of the earlier *Opinion* 26 (1910, *ibid.* **1989** : 63) that an objective definition should be given to the expression "évident" as used

in Article 19 by requiring that that expression should be interpreted as requiring "the presence (in the original publication) of clear evidence that the spelling used for the name in question was erroneous." It is true that later—in other *Opinions* relating to the emendation of particular names—the International Commission discarded the criterion which it had itself laid down in the period 1910-1911, but now that the whole problem of the emendation of names has been thrown wide open, it is clearly desirable that the merits of the test indicated above should be carefully re-examined. Particular attention was given to this question by the Smithsonian Sub-Committee in its Report published in 1947, to which reference has already been made (paragraph 17 above); that Sub-Committee then recommended that Article 19 should be redrafted in such a way as to substitute for the subjective expression "évident" (which in practice had rendered that Article incapable of obtaining finality in the spelling of names) a provision which would restrict the emendation of names to cases where it was demonstrable from the original publication that a spelling mistake had occurred. The actual proposal was that the Article should be rewritten so as to provide that the original spelling of a name is to be retained, "unless it can be demonstrated from the original publication itself that there has occurred an inadvertent error, such as a *lapsus* or a copyist's or printer's error." This formula, though a great improvement upon the existing wording of Article 19, nevertheless suffers to some extent from the same weakness, for it must often be a matter of opinion whether the evidence contained in the body of a book or paper in which a misspelt name is first published is sufficient to justify the conclusion that a mistake in spelling has been unquestionably "demonstrated" by that evidence. While, for reasons explained later, I consider that the formula suggested would be too restrictive, if not supplemented in various directions, I am in full agreement with the object underlying this part of the Smithsonian proposal, but it seems to me that, if we are to have—and I think that we should have—a provision for the automatic correction of certain classes of spelling mistakes, it is essential that that provision should be based upon criteria absolutely objective in character and therefore incapable of being interpreted in more than one way. I accordingly suggest that the automatic provision to be included in the revised scheme should be limited to those cases where the author of the book containing a new name or the editor of a serial publication or other work containing such a name expressly corrects the spelling of the name in question, either in a corrigendum or in a supplementary note of an equivalent kind published in the same volume. If such a provision were to be adopted, it would, I suggest, be reasonable not to insist, in the case of a book published in parts or of a paper published in a serial publication similarly issued, that the corrigendum should be published in the same part—that is, on exactly the same date; corrections of this kind are commonly published at the conclusion of a volume published in parts and it would, I suggest, be reasonable to recognise a correction published in this way, though, in order to insure against the risk that—as occasionally happens—the publication of the concluding part of a volume is delayed for a long time (sometimes for years)—it would, I suggest, be reasonable to confine this concession to *corrigenda* included in the same volume as that in which the name itself first appeared (in its incorrect form) and published within a period of twelve months from the date on which the name in question

was published. These proposals do not apply to scientific names consisting of, or based upon, the names of persons and places, the position as regards which is discussed in paragraphs 38-45 below.

33. Classes of scientific names consisting of, or based upon, words containing spelling mistakes to which it is suggested that provisions for automatic emendation should apply: It is suggested that the provisions for the automatic emendation of scientific names consisting of words containing spelling mistakes discussed in the preceding paragraph should apply to all scientific names, other than scientific names based on the names of persons or places, irrespective of their date of publication. It is desirable, however, that one safeguard should be added to the foregoing provisions, in order to ward against the risk that the "correction" of a previously published spelling mistake given in a *corrigendum* by the author or editor concerned may itself be incorrect. This is by no means a negligible risk, especially now that so many new names are published by authors possessing little or no knowledge of the Latin language. It is accordingly suggested that an emendation made under the automatic provisions shall be final, save where, on receipt of an application from specialists, the International Commission on Zoological Nomenclature, after having given public notice in the manner suggested in paragraph 26 above and subject to the procedure there suggested, may decide either that the name, as originally published, was correctly spelt or that the original spelling was incorrect but that the altered spelling given in the corrigendum published by the author or editor concerned was also incorrect, in either of which cases it should be the duty of the Commission to decide how the scientific name is to be spelt.

34. Classes of scientific names consisting of, or based upon, words containing spelling mistakes which would not be eligible for emendation under the automatic provisions suggested but for the emendation of which it is desirable that means should be provided: The provision suggested in the preceding paragraph would secure in a convenient way the emendation of scientific names which were misspelt at the time that they were originally published, but where the spelling mistakes in question were corrected by the author or editor concerned. It is necessary, however, in my opinion, that this provision should be supplemented, though in different ways, by special provisions. (a) as regards scientific names, for spelling mistakes in which emendations have been published before the revised scheme comes into operation, and (b) as regards scientific names published after the coming into operation of that scheme in cases where such names contain serious spelling mistakes which were not corrected by the author or editor concerned. These special classes of case are discussed in the following paragraphs. In addition, as already noted, separate consideration needs to be given to the position of scientific names based on the names of persons and places (see paragraphs 38-45).

35. Spelling to be adopted for scientific names, other than scientific names based upon the names of persons or places, published prior to the coming into operation of the revised scheme, in cases where the names in question contain spelling mistakes which are not subject

to automatic emendation and for which emendations have been published prior to that date: We have now to consider that group of scientific names for which, prior to the coming into operation of the revised scheme, emendations have (or will have) been published on the ground that the words of which those names consist contain spelling mistakes. The provision for the automatic emendation of scientific names, in which spelling mistakes were corrected at the time of publication by the original author or editor, suggested in paragraph 33 above, will afford a means for the emendation of a certain number of names consisting of misspelt words published before the coming into operation of the revised scheme. We are left, however, with the much larger number of names which, when originally published, consisted of words containing spelling mistakes (1) which are not eligible for automatic emendation, but (2) for which emendations have been (or will have been) published before the coming into operation of the revised scheme. Many of these emendations have been adopted by specialists in the groups concerned but a much larger number have not been accepted or, if used at all, have been used only by a few authors. The position as regards this group of names is very similar to that of scientific names consisting of words containing errors of transliteration, for which emendations have been (or will have been) published prior to the coming into operation of the revised scheme—a group of names which has been discussed in paragraph 26 above. As in that case, so also in the present case, (a) it is essential to avoid the confusion and disturbance which would result either from the abandonment of long-accepted emendations or from the acceptance of emendations already published but not hitherto adopted by specialists in the groups concerned, (b) it is impossible to devise a provision of a general character which would preserve those emendations in current use but would permanently reject those that are not in use at the time of the coming into operation of the revised scheme. It is accordingly suggested that the two groups of scientific names should be treated in the same way, that is in the way proposed in paragraph 26 above. Under this proposal the initial assumption would be that any given name was correctly spelt at the time when it was originally published but there would also be provision for specialists to submit to the International Commission on Zoological Nomenclature any emendation of the name concerned published prior to the coming into operation of the revised scheme and it would be the duty of the Commission to decide whether that emendation should be accepted or rejected. The procedure to be followed by the Commission in dealing with such cases and the criteria to be followed by the Commission in reaching its decisions would be the same as those suggested in paragraph 26 in the case of names which, prior to the coming into operation of the revised scheme, had been emended on the ground that the words of which they consisted contained errors of transliteration. Finally, it is submitted that the *Recommandation* suggested (in the paragraph referred to above) to be added to the *Règles* to check the activities of mischievous name-changers should be extended to apply to names emended before the coming into operation of the revised scheme for the purpose of correcting spelling mistakes in words published as scientific names. As noted at the beginning of the present paragraph, the foregoing suggestion does not apply to scientific names based upon the names of persons and places, which are considered separately in paragraphs 38-45 below.

36. Emendation of scientific names, other than scientific names based upon the names of persons or places, published after the coming into operation of the revised scheme, where those scientific names consist of words containing spelling mistakes not subject to automatic emendation: I have suggested (in paragraph 33 above) that scientific names consisting of words containing spelling mistakes should be subject to automatic emendation only where the spelling mistake committed is corrected by the author of the name in question or by the editor of the publication in which the misspelt name was originally published and where the correction concerned is published in the same volume as the misspelt name. But it will, I think, be generally agreed that it would be illogical in the highest degree to provide (in the foregoing manner) for the emendation of scientific names consisting of words containing spelling mistakes committed by authors who (or whose editors) were sufficiently careful themselves to correct spelling mistakes, for which they were responsible, if equally serious, or more serious spelling mistakes committed by authors too careless even to correct the mistakes which they made were to be perpetuated for all time, for such a system, if it were to be tolerated, could put a positive premium upon ignorance and carelessness. For this reason alone, it will, I think, be essential that the revised scheme should contain some provision for the emendation of scientific names containing serious spelling mistakes made by authors who fail to correct mistakes which they have committed. There is a further reason why it is, in my view, desirable that there should be some mechanism for emending scientific names containing serious blunders of this kind. This is that the acceptance of the very restricted field within which, under the scheme now suggested, spelling mistakes will be subject to automatic correction (and the scientific names concerned to automatic emendation) will call for a substantial concession on the part of classically trained zoologists who attach importance to the correct spelling of Latin words, when used as scientific names. It would, in my view, be asking those zoologists to make an unreasonably heavy sacrifice from their point of view, if the revised scheme were to contain no provision at all for the emendation of scientific names consisting of misspelt words in cases where the authors of those names failed to make the required correction at the time when the scientific name concerned was published. The problem with which we are here concerned does not arise to any appreciable extent in connection with scientific names published prior to the coming into operation of the revised scheme, since it may certainly be expected that names containing a serious spelling mistake (as contrasted with an error of transliteration, a type of mistake often much more difficult to correct) will almost always have been emended before the foregoing date. The question whether an emendation so made is to be accepted or rejected will, I have suggested, be subject to the special procedure indicated in paragraph 35 above. We are left therefore with the question of the provision which should be included in the revised scheme for the emendation of scientific names published after that scheme comes into operation in cases where the words of which those names consist contain spelling mistakes. It is suggested that the problem of the emendation of scientific names belonging to this group should be dealt with in the same way as that arising in respect of the parallel group of scientific names consisting of words incorrectly transliterated into the Latin alphabet, i.e., that this

group of names should be dealt with in the manner indicated in paragraph 28 above. Such names would, under this arrangement, be incapable of being emended by any author but it would be open to anyone who was of the opinion that the word constituting a given scientific name contained a spelling mistake which ought to be corrected to make application to the International Commission on Zoological Nomenclature for the scientific name in question to be emended: it would thereupon be the duty of the Commission to give public notice of the receipt of the application in the manner indicated in paragraph 26 of the present paper and, having done so, to reach a decision in the light of the procedure suggested in that paragraph.

(e) Spelling mistakes due to printers' errors

37. The problem arising when a scientific name contains a spelling mistake as the result of a printer's error: The last of the three categories of error recognised by Article 19 as constituting grounds for the emendation of a scientific name is the "*faute d'impression*" (printer's error). The two earlier categories of error recognised by Article 19, namely (i) the errors arising from the incorrect transliteration of a word from one alphabet to another and (ii) the errors arising from simple spelling mistakes, are genuinely distinct from one another, since the former depends entirely upon the prior adoption of a set of rules for the transliteration of words from the alphabets concerned, while the latter has its roots firmly in the structure of the language itself. When, however, we turn to the category "*faute d'impression*," we find that there is no such distinction, for a printer's error (*faute d'impression*) is no more than one of a number of different ways in which a spelling mistake (*faute d'orthographe*) may arise. From the point of view of whether or not, for the purposes of zoological nomenclature, a spelling mistake (*faute d'orthographe*) was committed when a name was published, it is absolutely immaterial whether that spelling mistake was committed by the author of a name, by the typist who copied the paper, by the editor of the book or paper containing that name, by the publisher or by the printer. The recognition of the category "*faute d'impression*" as a category distinct from that of "*faute d'orthographe*" is therefore absolutely illogical and pointless. But it is more than that: such a distinction is positively objectionable, for the inclusion of this category in Article 19 has actively promoted confusion by the attempts to which it has given rise to find for the expression "*faute d'orthographe*" some narrower meaning than it in fact possesses, in order to exclude from its scope the particular type of "*faute d'orthographe*" represented by the "*faute d'impression*." As our object is to secure that the revised scheme shall be free from the obscurities and other difficulties implicit in the existing Article 19, I am of the opinion that that scheme should not deal separately with printer's errors as such but should provide generally for the treatment of spelling mistakes, thus dealing with mistakes in spelling arising from printer's errors simultaneously with mistakes of spelling due to all other causes,

(f) Question of the emendation of scientific names which consist either (1) of words based upon the names of persons or (2) of words based upon place-names

38. Both in the discussion of the procedure to be adopted in regard to the emendation of scientific names consisting of words transliterated into the Latin alphabet from some other alphabet (paragraph 25 above) and also in the later discussion regarding the procedure to be adopted for the emendation of names which, when first published, contained spelling mistakes (paragraph 31 above), I suggested that there are two classes of names which raised special problems which it would, I thought, be convenient to consider separately. The classes in question were: (1) scientific names which either consist of, or are based upon, the names of persons, (2) scientific names consisting of, or based upon, place-names. Each of the foregoing groups needs to be considered in relation to names based upon words derived from languages using alphabets other than the Latin alphabet and in relation to names where no problem of transliteration arises.

39. Emendation of scientific names consisting of, or based upon, the names of persons, where the names of those persons are normally written in some alphabet other than the Latin alphabet: In the earlier part of the present paper where consideration was given to the procedure to be adopted for the emendation of scientific names consisting of, or based upon, words transliterated into the Latin alphabet from some other alphabet, I have suggested that, for the reasons there given, the emendation of names belonging to this class should be restricted within very narrow bounds and that, except in the special case referred to below, emendations published before the entry into operation of the new scheme should be accepted as valid only when approved by the International Commission on Zoological Nomenclature, while after that date emendations on the ground of defective transliteration should be made only by the Commission, with a possible exception in the case of names published after the above date, of words transliterated from languages, for the transliteration of words from which guidance is given in the Schedules to the *Règles*, where I have suggested that it might be desirable that incorrect transliterations contained in scientific names published after the entry into force of the revised scheme should be subject to automatic emendation in accordance with the rules for transliteration contained in the Schedules, which for this purpose would need to be given mandatory force. The special class which (as explained above) was reserved for further consideration was that represented by scientific names consisting of, or based upon, the names of persons, where the names of those persons are normally written in some alphabet other than the Latin alphabet. As regards these I would suggest that, except in the case specified below, the rules relating to the emendation of scientific names of this class should be the same as those for the emendation of other scientific names consisting of, or based upon, words transliterated into the Latin alphabet from some other alphabet. The exception which I suggest should be recognised relates to scientific names of Personages (whether deities or human beings) of Greek Antiquity. What I have in mind is to secure that, irrespective of the date on which a given scientific name is published

(both when such a name was published before, and when it is published after, the entry into force of the revised scheme), a scientific name which consists of a defective transliteration of the name of a classical Greek deity or person should be subject to automatic emendation. The purpose of this suggestion is to prevent the perpetuation of such outrages as are represented by (for example) names like *Appolo* or *Apolo*, when the name intended is that of the Greek God Apollo, or *Arristides* or *Aristiddes*, when the name intended is that of the celebrated Athenian statesman Aristides. The recognition of a distinction for nomenclatorial purposes between the names of Personages of Antiquity and those of modern persons would be no novelty, for precisely the same distinction has already been recognised by the International Congress of Zoology in connection with the formation, under Article 14 of the *Règles*, of trivial names based upon the names of persons (1950, *Bull. zool. Nomencl.* 4:200). The concession here suggested is a small one, but is, I consider, essentially reasonable. Moreover, it will be particularly welcome to classically trained zoologists, to whom errors of transliteration of this kind are peculiarly objectionable, and should make it easier for such zoologists to support the substantial restriction in the scope within which, under the scheme suggested, emendation will in future be permitted for scientific names consisting of defectively transliterated words.

40. Emendation of scientific names consisting of, or based upon, the names of persons, where spelling mistakes (as contrasted with errors of transliteration) were committed when the names in question were first published : So far as I can see, the rules suggested in the earlier part of the present paper for the regulation of the emendation of scientific names which, when first published, contained spelling mistakes, are just as suitable for cases where the scientific name in question consists of, or is based upon, the name of a person as they are for any other class of scientific names, save in one special class of case. The class which I have in mind is that which consists of scientific names which consist of, or are based upon, the names of Personages of Roman Antiquity. The perpetuation of such misspellings as *Vennus* for *Venus*, *Cesar* for *Caesar*, or *Antonnius* for *Antoninus* would be extremely objectionable to any classically trained zoologist (and also to many others); for this reason I suggest that the emendation of such names should be placed on the same footing as that recommended above (paragraph 39) for that of scientific names consisting of, or based upon, erroneously transliterated versions of the names of Personages of Greek Antiquity. I accordingly suggest that, as a small concession to those zoologists to whom the proposed restriction in the scope for the emendation of incorrectly formed scientific names is objectionable, spelling mistakes in scientific names consisting of, or based upon, the names of Personages of Roman Antiquity should be made subject to automatic emendation.

41. Emendation of scientific names consisting of, or based upon, the names of places, where the names of those places are normally written in some alphabet other than the Latin alphabet : For reasons similar to those discussed in the two immediately preceding paragraphs. I cannot see any justification for the perpetuation of errors of transliteration

of place-names of Greek Antiquity when such place-names are used as, or as the basis of, scientific names. For example, the misspelling *athennaues* or *atheneus* for *athenaeus* as the trivial name of a species or sub-species taken near Athens is one which, I consider, should not be permitted; the perpetuation of such errors in scientific names would be highly distasteful to anyone possessing any classical training. I suggest therefore that in this case (as in those discussed in paragraphs 39 and 40 above), there should be provision for the automatic correction of errors of the kind under consideration through the automatic emendation of incorrectly formed scientific names of this sort.

42. Emendation of scientific names which, when first published, contained spelling mistakes, in the case of scientific names consisting of, or based upon, the names of places in the Roman World: From the point of view of the need for the correction of spelling mistakes, the names of places in the Roman World, when those place-names are used for, or as the basis of, scientific names seem to me to stand in a position exactly similar to that occupied by the names of places in Greek Antiquity, when the names of those places are incorrectly transliterated on being used for, or as the basis of, scientific names. I accordingly suggest that spelling mistakes in such names committed at the time when a given scientific name is first published should be subject to automatic correction, the name in question being thus automatically emended.

43. Suggested safeguard in relation to the automatic emendation of scientific names on the ground that those names consist of, or are based upon, either the names of Personages of Antiquity or the names of places in the Greek and Roman Worlds of Antiquity: In the great majority of cases there will be no doubt as to whether a given scientific name consists of, or is based upon, either the name of a Personage of Antiquity or upon the name of a place in the Greek or Roman Worlds of Antiquity. In view, however, of the fact that both generic names and trivial names (specific, subspecific and infra-subspecific) may consist of arbitrary combinations of letters, cases may occasionally arise where a given scientific name made up of a particular combination of letters has the appearance of being a misspelt version either of the name of a Personage of Antiquity or of the name of a place in the Antique Worlds of Greece or Rome, but in fact is not a name so based, being no more than an arbitrary combination of letters. I suggest that, in order to deal with such a contingency, the provisions relating to the automatic emendation of names of the foregoing classes (i.e., the classes specified in paragraphs 39 to 42 above) should be qualified by a proviso prescribing that, where there is disagreement among specialists as to whether a given scientific name belongs to one of these classes, the problem relating to that name is to be submitted to the International Commission on Zoological Nomenclature, whose duty it shall be to determine whether the name in question is to be emended and, if so, in what way. In order to minimise the occurrence in future of doubtful cases of this kind, it is suggested that there should be inserted in the *Règles* a *Recommandation* inviting authors, when publishing new names, (1) to state the origin of such names or, alternatively, to state that the names in question consist of arbitrary combinations of letters, and (2), in

the case of a trivial name, to state whether the name in question is a noun substantive or an adjective. The purpose of the second portion of the proposed *Recommendation* is to avoid, so far as possible, the recurrence of cases where confusion has arisen through later authors mistaking a noun for an adjective and accordingly making erroneous variations in the name in question for the purpose (as the author believed) of bringing the trivial name into grammatical agreement with the name of the genus in which the species or subspecies concerned is placed.

44. Question of the emendation of scientific names consisting of, or based upon, place-names, other than the names of places in the Greek or Roman Worlds of Antiquity : The suggestions put forward in the earlier part of the present paper contemplate that the only circumstances in which a scientific name will be subject to emendation on the ground that, as originally published, it contained a spelling mistake (as contrasted with an error of transliteration) without resort to the International Commission on Zoological Nomenclature will be when in the same volume as that in which the scientific name in question was first published, the spelling of the name is expressly emended on the ground that the name as originally published contained a spelling mistake. As I then explained (paragraph 32), the foregoing suggestion was not intended to apply to scientific names consisting of, or based upon, the names of places. We have since considered the special problem presented by scientific names consisting of, or based upon, the names of places in the Greek and Roman Worlds of Antiquity (paragraphs 41 and 42 above), and it is now necessary to consider the case of scientific names consisting of, or based upon, the names of places in the Modern World. In the great majority of cases the spelling of modern place-names has attained a high degree of stability, and in such cases no difficulty would arise in the acceptance of a rule under which a spelling change made by way of correction by the original author of a name in the same volume as that in which the name was first published would automatically replace the original spelling of the name in question. But not all modern place-names have reached this degree of stability, there being cases of polymorphism in the spelling of modern place-names and also cases of evolution in the spelling of such names. A good example of a name, the spelling of which appears at least for some purposes to be in a process of evolution, has been brought to my notice by Dr. W. J. Arkell, F.R.S. This is the place-name "Kimeridge," the name of a place of importance in geological literature. The above is the original spelling of the name of this place and the one which has been generally used by geologists; comparatively recently, however, the British General Post Office has started to spell this name as "Kimmeridge" (i.e., with a double "m") and the same spelling has been adopted by the British Road Transport Authorities. Again, there are cases where the official authorities referred to above have adopted definitely erroneous spelling variants for place-names, as in the case of the neologism "Handborough" for "Hanborough" (in Oxfordshire), a name derived from "Hananbeorg," i.e., Hana's place. It would clearly be objectionable to have a provision which left it to the discretion of individual authors whether scientific names based upon the names of such places as those mentioned above should be emended, in the case of Kimeridge, to the unaccustomed spelling Kim-

meridge, and, in the case of Hanborough, to the incorrect spelling Handborough. The foregoing considerations apply naturally with even greater to scientific names based upon the names of places normally written in some alphabet other than the Latin Alphabet. In these circumstances I suggest that the proposed provision to give valid force to the emendation of a scientific name on the ground that, as originally published, it contained a spelling mistake, when that emendation is made in the same volume as that in which the name in its incorrectly spelt form was originally published, should be limited so as to exclude from its scope scientific names based upon the names of places. Under this suggestion, the question whether any such name, as originally published, contained a spelling mistake and therefore whether it should be emended and, if so, in what way, would be a matter which could be settled only by a decision obtained from the International Commission on Zoological Nomenclature. This provision should apply to all such names irrespective of their date of publication.

45. The special type of spelling mistake which may arise from the misreading or miscopying of the name of the type locality or of the captor of a specimen at the time when a new name is devised : It often happens that (for example) a trivial name is devised by coining a neo-Latin word based upon the type locality of the specimen selected to be the holotype of a new nominal species or upon the name of the person by whom that specimen was collected. Occasionally, an author may coin a new name in this way without being fully conversant with the name of the type locality or the person by whom the type specimen was collected. In such a case the author concerned is bound to rely upon the label attached to the specimen in question or upon some similar source such as a museum register. In such circumstances there is always the possibility that through either the misreading of a manuscript source of this kind or the miscopying of a word from such a source an author accidentally coins a name which is a nonsense name in the sense that it fails to provide the indication (regarding the name of the type locality or that of the captor of the type specimen) intended and is indeed positively misleading. An example of this kind was dealt with by the International Commission on Zoological Nomenclature in its *Opinion* 63 (1914, *Smithson. Publ.* **2256** : 150) ; that *Opinion* was concerned with the trivial name consisting of the neo-Latin word "hakuensis," which was intended to indicate the name of the lake in Japan in which the type specimen of the fish in question had been caught. The actual name of the lake in question was, however, "Hakone" ; the actual specimen was labelled "Lake Hakon." It was due solely to a misreading of, or to a miscopying from, this label that the meaningless trivial name "hakuensis" had its origin. The Commission decided in the present case that the name should be corrected to "hakonensis," though (as the "Discussion" in this case shows) the Commission was far from clear as to how this case fitted into the actual provisions of Article 19. At Paris in 1948 the International Congress, on the advice of the Commission, recognised that, on the rare occasions on which a mistake of this kind is committed, it should be corrected. A mistake of the kind described above is no more than a rather special form of spelling mistake ; it differs, however, from other kinds in that, while in any given case it is clear that a mistake has been committed,

it may not always be absolutely clear how the name should be emended. Accordingly, it is suggested that this special type of spelling mistake, like other spelling mistakes in scientific names consisting of, or based upon, the names of places should not be subject to automatic emendation but should be susceptible of emendation only by the International Commission on Zoological Nomenclature. The provisional stopgap provision adopted by the Paris (1948) Congress rendering special spelling mistakes of this kind subject to automatic correction (and the scientific names concerned subject to automatic emendation) (1950, *Bull. zool. Nomencl.* **4**: 143) should, therefore, I suggest, be reversed. There is one further point which needs to be considered in relation to spelling mistakes of this special kind. This is: What shall be the status, for the purposes of the Law of Homonymy, of the original (erroneous) spelling? In other words—to take as an example the case dealt with in *Opinion* 63—would the trivial name *hakuensis* erroneously published by Günther render invalid, as a junior homonym, any later use of that name for some other fish in the genus concerned (*Leuciscus*)? I suggest that this question should be answered in the negative and that a misspelling such as Günther's *hakuensis* should have no status under the Law of Homonymy. The definition which I have suggested (paragraph 18 above) should be attached to the expression "erroneous original spelling" will secure this result.

(g) Question of the grant to the International Commission on Zoological Nomenclature of power to prescribe the adoption or, as the case may be, the rejection of emendations of any given scientific name in respect of all usages of that name in zoological nomenclature

46. Cases where an identical problem of emendation arises either with (a) two or more generic names or (b) with two or more trivial names (specific, subspecific or infra-subspecific) of taxonomic units belonging to different genera: So far we have considered the problem of the emendation of scientific names as though every such problem raises issues of a unique character peculiar to itself. But, as every systematist knows, this is not the case. For at the generic-name level it occasionally happens that there are published two or more generic names which would be absolutely identical with one another if it were not for the fact that the word of which the name consists has been transliterated into the Latin alphabet in different ways. An example of this class of case is presented by the names *Jakowleffia* Puton, 1875, *Yakovlevia* Fredericks, 1925, and *Yakovlevia* Vologdin, 1931, on which an application (Z.N.(S.)530) has already been submitted to the Commission by Dr. Helen Muir-Wood (1951, *Bull. zool. Nomencl.* **6**: 90-92). The class of case with which we are here concerned occurs much more commonly when variant forms are published of what is essentially the same word, when such a word is used as the trivial name of two or more species belonging to different genera. The question which we have now to consider and on which the views of specialists are sought is this: Where a decision is taken by the

International Commission on Zoological Nomenclature as to the correct spelling of a given word as used as the name of a given taxonomic unit (whether a nominal genus or a nominal species or lower taxonomic category) should the ruling so given apply only to the spelling of the name of the taxonomic unit in respect of which the application to the Commission was submitted or should it apply also to every use of the word in question as applied to other taxonomic units? To restrict such a ruling to the individual case in respect of which it was actually raised would have the disadvantage that, if the word in question were commonly used as a name for taxonomic units and if the spelling error concerned were one commonly committed, a great deal of repetition and unnecessary work would be involved if it were necessary for the Commission to cover the same ground again and again in relation to each separate use of the same word. From this point of view it would be a great convenience if the Commission were to be expressly empowered not only (as at present) to give rulings in regard to the emendation of names as applied to individual taxonomic units but also to give rulings in regard to the spelling to be adopted for groups of identical names. On the other hand, it is possible that a case might arise where, owing, for example, to deeply embedded habit on the part of specialists concerned, the Commission might think it desirable in some given case to authorise the maintenance of an erroneous spelling, while thinking it desirable in the case of uses of the same name for other taxonomic units to direct that the name in question should be emended to its correct form. Such cases would, no doubt, be extremely rare and it may therefore be felt that they could be dealt with on their merits by the Commission under its plenary powers when they arose. If this were to be the general view on this matter, time and convenience would be served and money saved if the Commission were to be granted power to prescribe the adoption, or alternatively the rejection, of emendations of any given name in respect of all usages of that name in zoological nomenclature.

(h) Suggested general form of the revised scheme and proposed definition of two expressions

47. Proposed definition in the "Règles" of the expressions "faute de transcription" and "faute d'orthographe": In the introductory portion of the present paper I have shown (paragraph 5) that the principal reason for the failure of the existing Article 19 to provide a sure means for determining whether a given name should be emended or not is the subjective character of the tests laid down in that Article for determining this question and I have expressed the opinion (paragraph 12) that it is essential that the phraseology to be employed in the revised scheme should be absolutely unambiguous, bearing a meaning which is beyond possibility of question. Having now completed our review of the problems involved in the emendation of names for each of three categories of error specified in Article 19, we may conveniently revert to the question of the means to be adopted for ensuring that the wording used in the revised scheme is as clear as it can possibly be made. We may first note that, although Article

19 specifies three categories of error as affording legitimate ground for the emendation of a scientific name, there are in fact only two categories, the third category ("faute d'impression"—printer's error) being no more than one of a number of causes which may contribute to errors belonging to the second category of error, namely the "faute d'orthographe" or spelling mistake. Thus, the problem of the emendation of names resolves itself into the question of the rules to be adopted for regulating the emendation of a name on the ground that, as originally published, the word of which that name was composed contained not any one of three, but either of two, types of mistake, those mistakes being either (1) a "faute de transcription" (error of transliteration) or (2) a "faute d'orthographe" (spelling mistake). Second, we have to note that both the expression "faute de transcription" (paragraph 22) and the expression "faute d'orthographe" (paragraph 30) have at different times been interpreted in different ways by different authors. In these circumstances it appears to me essential that the revised scheme should contain precise definitions of the meanings to be attached to the foregoing expressions. The definitions which I suggest should be adopted are the following:—

| <i>Expression</i> | <i>Proposed definition</i> |
|--|---|
| "faute de transcription" (error of transliteration) | any spelling mistake due to the adoption of an erroneous method of transliterating a word into the Latin alphabet from some other alphabet. |
| "faute d'orthographe" (spelling mistake) | any erroneous spelling, other than a <i>faute de transcription</i> (as defined above). |

48. Suggested general form of the revised scheme: We have now defined the two categories of error on account of which alone the emendation of a scientific name will, it is suggested, in future be permissible and have outlined the conditions upon which alone, it is suggested, a scientific name is to be subject to emendation. We are therefore now in a position to consider the general form which it is desirable that the revised scheme should take. For the reasons explained in the earlier part of the present paper the revised scheme should, it is suggested, be such as substantially to restrict the field within which the emendation of scientific names will be permissible and also, in most cases, to reserve the right to emend names (or to approve the emendation of names) to an external authority, namely the International Commission on Zoological Nomenclature, that body being given for this purpose clear instructions as to the principles which should guide it in reaching a decision on whether, as regards any individual scientific name, emendation should be permitted or not. In these circumstances, it is, I consider, desirable that the revised scheme should commence with a Declaratory Article prescribing in the most categorical terms that the original spelling of a name is to be maintained, except and in so far as the immediately following Articles provide that in the circumstances specified in those Articles a scientific name is to be emended on the ground that the word of which that name is composed or on which it is based contained, when the name was first published, either an error of transliteration or a spelling mistake. The Articles providing for

the emendation of a scientific name should, I suggest, be three in number. The first of these Articles would prescribe the limited classes of case where a scientific name is to be subject to automatic emendation; these are the cases discussed in paragraphs 29, 33, 39-40, and 41-42 of the present paper. The second of the Articles in question would set out the procedure to be followed for determining, by reference to the International Commission on Zoological Nomenclature, whether an emendation published before the coming-into operation of the revised scheme is to be rejected or accepted; this subject is discussed in paragraphs 26 and 35 of the present paper. The third of the suggested Articles would provide that, after the coming-into operation of the revised scheme, the power to emend scientific names would be vested exclusively in the Commission. See paragraphs 34 and 42 of the present paper. A further Article would be required laying down the procedure to be followed by the Commission in dealing with applications submitted to it in regard to the emendation of names and the criteria to be followed by it in reaching decisions on such applications. As already explained (paragraph 26), the object of this Article would be, first, to ensure the maximum publicity for all such applications before any decision was taken thereon, second, to make it obligatory upon the Commission, when reaching decisions in such cases, to pay regard not so much to niceties of an etymological or philological nature as to the need for promoting stability in zoological nomenclature. Various other minor provisions would be needed if the scheme put forward in the present paper were to be approved, but these do not call for mention here, as they are set out in the summary given in paragraph 56 below and none of them in any way affects the general nature of the plan suggested. It is believed that a series of Articles such as those outlined above would be absolutely unambiguous in meaning and would provide a satisfactory basis for a scheme to replace the provisions at present embodied in Article 19. (In accordance with normal drafting practice, the definitions of the various concepts involved in the problem of the emendation of names which I have suggested (in paragraphs 17, 18, and 47 of the present paper) and which form an essential part of the plan for rendering the new provisions absolutely clear in meaning would, no doubt, be incorporated in an Article specially devoted to definitions of expressions used in the *Règles*, of which (it will be recalled) the last International Congress of Zoology agreed that a considerable number should be so inserted.)

(i) Transitional provisions

49. Confirmation of rulings already given in particular cases:

If, as has been suggested, the revised scheme for regulating the emendation of names should contain a provision repealing Article 19 in its entirety, together interpreted in the past by the International Commission on Zoological Nomenclature, some of the rulings given by the Commission in regard to individual names would cease to be correct, unless special action was taken to prevent those rulings from being invalidated. It would clearly be most undesirable that these rulings should be upset solely because of a revision of the general provisions relating to the emendation of names, for the name-changing involved

would be unaccompanied by any corresponding benefit. It is accordingly suggested that the revised scheme should contain a transitional provision maintaining and confirming the decisions in regard to the emendation of individual names recorded in *Opinions* rendered by the Commission up to that date. Similar protection should at the same time be given to emendations already accepted by the Commission when placing names on the *Official Lists*.

50. Repeal of existing provisions relating to the emendation of names: As in any case where a given provision is completely remodelled, it will be necessary that the revised scheme for regulating the emendation of names should contain a provision repealing Article 19 in its entirety, together with the provisional stopgap modifications of, and additions to, that Article adopted by the Thirteenth International Congress of Zoology in 1948 on the basis of the recommendations agreed upon by the International Commission at its Paris Session as recorded in Conclusion 15 of the Sixth of the Meetings then held by the Commission (1950, *Bull. zool. Nomencl.* 4: 141-144).

(j) Problems allied to, but distinct from, the problem of the emendation of names, on which it is desirable that decisions should be taken

51. There are several problems which have often been raised in discussions relating to the emendation of names but which, though allied to that problem, are logically quite distinct therefrom. Now, however, that the provisions relating to the emendation of names are to be thoroughly revised, it is desirable that the opportunity so presented should be taken for dealing also with these marginal problems. These problems are accordingly set out in the following paragraphs for the purpose of eliciting from specialists their views as to the action which it is desirable that the Commission should recommend the Copenhagen Congress to take.

52. Situation arising when two or more spellings are used for a given name at the time when that name is first published: It sometimes happens—especially in the old literature—that, at the time when a new name is first published, two or more different spellings are used for that name in the book in question, the commonest case being where one spelling occurs in the text and another on the legend to a plate. In such a case a choice must be made as to which spelling is to be accepted. Although situations of this kind have sometimes in the past been treated as though they were connected in some way with the emendation of names, the issue involved is in fact quite a distinct one, for the solution of which there is no provision in the *Règles*. It is certainly desirable that this omission should be rectified. As regards the solution to be adopted, it would seem to me that the most convenient course would be to insert an Article in the *Règles* providing that in such a case whichever of the original spellings is selected by the first subsequent

author to use the name shall be deemed to be the spelling in which the name in question was originally published, the other spellings taking rank as "erroneous original spellings." It would be necessary, if this solution were to be adopted, to lay down clearly the criterion to be adopted in determining whether any given subsequent author in fact selected one of the original spellings in preference to another. It is suggested that the criterion should be that for this purpose a selection should be deemed to have been made only if the author concerned makes it clear in some way (a) that he is aware that more than one spelling was used in the original book and (b) that from the spellings concerned he selects one to be the spelling employed. It goes without saying that, if a name selected in this way itself contained an error of transliteration (*faute de transcription*) or a spelling mistake (*faute d'orthographe*), that name would be liable to be emended in exactly the same way as if the version of the name selected in the foregoing manner had been the only version in which the name had been originally published.

53. Suggested incorporation in the "Règles" of rules relating to the formation of compound names: Professor (now Commissioner) Pierre Bonnet (Toulouse) drew attention at the Paris Congress to a number of questions relating to the formation of names consisting of compound words on which the *Règles* at present provide no guidance and in consequence there is diversity of practice among specialists as to the spelling to be adopted for the names concerned. Professor Bonnet suggested that the existing uncertainties regarding the formation of such names—and therefore the instability in this field of nomenclature—should be brought to an end by the incorporation in the *Règles* of an express provision regulating the formation of such names. Professor Bonnet's proposals which were embodied in his "Proposition 8" have since been published by the Commission (1950, *Bull. zool. Nomencl.* **3**: 185-187), to which reference is accordingly invited. These proposals included suggestions for dealing with the problems raised in connection with the connective vowel employed for linking two parts of compound trivial names and the practice to be followed for the avoidance of a hiatus in the case of compound names, the second portion of which commences with a vowel. At different times these and similar matters have been treated by some specialists as falling within the scope of Article 19 (emendation of names) and accordingly the specialists concerned have altered the spellings of such names on the ground that the original spelling was defective and required to be emended. It seems to me, however, that it would involve an undue stretching of the concept of "emendation" to bring matters of this type within the scope of Article 19 (still more, of the revised provisions to be substituted for that Article by the Copenhagen Congress). I accordingly suggest—and in this matter I therefore find myself in complete agreement with Professor Bonnet—that the logical, and therefore the proper, way to deal with this problem is not to force it artificially within the boundaries of the concept "emendation" but to deal with it (or each part of it) in a separate Article (or Articles) which would contain precise provisions as to the way in which questions of the foregoing type are to be dealt with. An Article (or Articles) of this kind, if adopted, would occupy a position exactly similar to that occupied by other Articles relating to the formation and orthography of names (i.e., Articles 14-16, 18 and 20), as regards

which, it will be recalled, the International Congress of Zoology has already decided (1950, *Bull. zool. Nomencl.* **4**: 67-68) that infringements are to be subject to automatic correction and therefore fall outside the scope of emendation.

54. Method to be adopted in the formation of adjectival trivial names based on the names of places and having the termination “-ensis”:

At the same time that Professor Pierre Bonnet drew attention to the problems arising in connection with the selection of a connective vowel in the case of names consisting of compound words, to which reference has been made in the immediately preceding paragraph, he drew attention also to the problem which arises in connection with the formation of adjectival trivial names, when these are based upon the names of places and are formed with the termination “-ensis” (Bonnet, 1950, *Bull. zool. Nomencl.* **3**: 197). As will be seen by reference to Professor Bonnet’s paper (and as many systematists have experienced in their work) the difficulty which arises here is due to the lack of a provision in the *Règles* regulating the formation of trivial names of this type. The question here is whether the vowel “i” should be used in forming inserted between the name of the place on which the neo-Latin adjective is formed and the termination “-ensis.” The problem involved is precisely the same as that which arises when a neo-Latin personal name, based upon the name of a modern person, is coined for the purposes of zoological nomenclature, a subject on which the International Congress of Zoology has ruled that the vowel “i” is not to be inserted as a connective vowel between the modern personal name (which forms the first part of the neo-Latin word) and the second declension termination “-us,” and therefore that, when for the purposes of Article 14 such a neo-Latin word is cited in the genitive case and in the singular number, the word so formed is not to end with a double “i” (except where this is inevitable as the result of the modern name itself ending with the letter “i” prior to Latinisation), *Opinion* 8 (in which a ruling in the opposite sense had incorrectly been given) being at the same time cancelled (see 1950, *Bull. zool. Nomencl.* **4**: 68). This subject is mentioned here, because in the past authors have treated such neo-Latin adjectives as “*canadiensis*” as a spelling mistake and have accordingly “emended” it to “*canadensis*.” As in the case discussed in the preceding paragraph, this procedure constitutes an undue strain upon the meaning of the concept “emendation” and it would clearly be much better that this problem in its various aspects should be dealt with separately in an Article to be inserted at some appropriate point in the group of Articles in the *Règles* which are concerned with the formation and orthography of names.

PART 3. SUMMARY OF PRINCIPAL CONCLUSIONS AND RECOMMENDATIONS AND REQUEST TO ZOOLOGISTS FOR COMMENT AND ADVICE

55. Principal Conclusions : Having now surveyed in detail the complex problems which need to be considered in drawing up any plan for the reform of the provisions in the *Règles* relating to the emendation of names, I am in a position to summarise as follows the conclusions which I have reached :—

- (1) The present provision relating to the emendation of names (Article 19) is seriously defective by reason of the subjective character of the tests there laid down for determining whether a given name is or is not to be emended. This has led to wide differences of opinion among zoologists as to the interpretation of this Article and in consequences to great diversity of practice in the emendation of names. Whatever decisions may be taken as to the scope within which the emendation of names is in future to be permitted, it is essential that the provisions to be included in the new Article for the purpose of giving effect to those decisions shall be defined by objective criteria and shall be free of all ambiguity (paragraphs 5, 12).
- (2) The underlying assumption in the existing Article 19 is that the spelling of scientific names consisting of misspelt Latin or Latinised words or of defectively transliterated Greek words is to be corrected and that zoologists in general possess the requisite knowledge of the Latin and Greek languages to enable them to make such corrections. During the fifty years which have elapsed since the Berlin (1901) Congress at which Article 19 was adopted, there has been a steady and progressive decline in the number of zoologists possessing a training in the Classical Languages and consequently in the importance attached by zoologists generally to securing a high standard of accuracy in the formation of names. These are tendencies of which account ought to be taken in any revised plan for regulating the emendation of scientific names on etymological and philological grounds (paragraphs 6-7).
- (3) Article 19 contemplated that scientific names should be emended, whenever they were published in a misspelt or otherwise defective form and therefore paid no regard to the need for securing stability for scientific names. In this respect Article 19 is not consistent with the growing desire on the part of zoologists for the avoidance, so far as possible, of changes in scientific names. It is important that the revised scheme for the emendation of names should pay full regard to the present general desire to secure the maximum attainable degree of stability in nomenclature (paragraphs 8-9).
- (4) For the reasons set forth above, I conclude that the general wish of zoologists will be that, in place of the existing Article 19, there shall be inserted in the *Règles* provisions for the emendation of names (*a*) which, by being based upon criteria of a strictly objective

character, will be free of ambiguity and will be capable of securing definite results in every case, (b) which recognise the decline, among zoologists, of knowledge of, and interest in, the Latin and Greek languages and accordingly attach less importance than hitherto to the need for emending on etymological or philological grounds names which either contain spelling mistakes or are incorrectly transliterated into the Latin alphabet, but which nevertheless ensure that, within certain clearly defined and restricted fields, mistakes of spelling or transliteration which are of a kind that would be peculiarly objectionable to the classically trained zoologist shall be capable of being emended, and (c) which, by the regard paid to the foregoing considerations are calculated to promote nomenclatorial stability by substantially restricting the field within which the emendation of scientific names will in future be permissible. The problem of the emendation of scientific names is one upon which very different views are held among zoologists, and in consequence if a generally acceptable scheme is to be devised, that scheme must be one which, while not conceding all the points sought by those who hold the most extreme points of view, nevertheless embodies all the features of each school of thought that are capable of being reconciled with one another. In other words, what is required is a compromise scheme which, by being as broadly based as it is possible to make it, will secure the maximum degree of support from all quarters. It is in the hope of securing a generally agreed settlement that the compromise scheme now submitted has been prepared for the consideration of zoologists (paragraphs 14, 15).

56. Summary of compromise suggested for the clarification of the Law of Emendation and for the restriction of the scope of that Law :

The following is a summary of the suggestions for the clarification of the Law of Emendation and for the restriction of the scope of that Law put forward in the present paper for the consideration of specialists :—

- (1) that for the purpose of reducing to the minimum the opportunities for misunderstanding the revised provisions relating to the emendation of scientific names, certain of the concepts involved should be denoted by the under-mentioned expressions, those expressions being defined as follows :—

| <i>Expression</i> | <i>Definition of expression in Coll (1)</i> |
|-------------------|---|
| (1) | (2) |
| "Emendation" | Any change in the spelling of a previously published scientific name, which the author of that spelling change makes clear is intentional (paragraph 17). |

| <i>Expression</i> | <i>Definition of expression in Col. (1)</i> |
|---|--|
| (1) | (2) |
| "Erroneous spelling change" | Any change in the spelling of a previously published scientific name, other than an emendation (paragraph 17). |
| "Valid emendation" | An emendation made in accordance with any of the methods prescribed for the emending of names (paragraph 18). |
| "Invalid emendation" | Any emendation, other than a valid emendation (paragraph 18). |
| "Erroneous original spelling" | The original spelling of a scientific name, when that spelling is subsequently rejected in favour of a valid emendation (paragraph 18). |
| "Error of transliteration" ("faute de transcription" in the substantive French text) | Any spelling mistake due to the adoption of an erroneous method of transliterating a word into the Latin alphabet from some other alphabet (paragraph 47). |
| "Spelling mistake" ("faute d'orthographe" in the sub- stantive French text) | Any erroneous spelling, other than an error of transliteration ("faute de transcription") (paragraph 47). |

(2) that the main provisions in the revised scheme should be in the following general form :—

- (a) a Declaratory Article prescribing that the original spelling of a scientific name is to be maintained, except and in so far as the Articles referred to in (b) and (c) below provide that a scientific name is to be emended on account of an error of transliteration or of a spelling mistake in the word of which the name in question is composed ;
- (b) an Article specifying the classes of names which are to be subject to automatic emendation, when the words, of which the names concerned are composed, contain, as the case may be, an error of transliteration or a spelling mistake ;

- (c) an Article prescribing the procedure to be followed in determining whether an emendation published prior to the date on which the revised scheme comes into operation (hereafter referred to as the "appointed day"), other than an emendation falling in class (b) above, is to be emended ;
 - (d) an Article prescribing the procedure by which alone after the appointed day a scientific name, other than a name belonging to either of the classes specified in (a) and (b) above, may be emended on the ground that the word of which that name is composed or on which it is based contains an error of transliteration or a spelling mistake ; (paragraph 48)
- (3) that the Article referred to in (2) (b) above should provide that, where the word of which a scientific name is composed or on which it is based contains either an error of transliteration or a spelling mistake, that error or, as the case may be, that mistake is to be automatically corrected and the scientific name concerned emended :—
- (a) where the word concerned is :—
 - (i) the name of a Personage (whether a deity or a human being) of Classical Greek or Roman Antiquity ;
 - (ii) the name of a place in the Antique World of Greece or Rome, subject, in either case, to the proviso that, where there is disagreement among specialists as to whether the word in question belongs to one of the foregoing classes, the problem relating to that name is to be referred to the International Commission on Zoological Nomenclature (hereinafter referred to as the "Commission"), whose duty it shall be to decide whether the scientific name of which that name consists or on which it is based is to be emended and, if so, in what way ; (paragraphs 39-43)
 - (b) in the case of a spelling mistake, other than a spelling mistake made in a scientific name falling in class (a) above or a name consisting of, or based upon, a modern place-name, where that mistake is, within a period of twelve months, expressly corrected by means of a corrigendum or equivalent note in the same volume as that in which the scientific name was first published, subject to the proviso that, on receipt of an application by specialists, it shall be open to the Commission, subject to the procedure specified in (6) below, to declare, if it is so satisfied, that the spelling change specified in the *corrigendum* or equivalent note was itself incorrect, to direct either that the original spelling of the name be accepted or that the name be emended in some way other than that specified in the *corrigendum* or equivalent note ; (paragraphs 32, 33)

- (c) where, in the case of a scientific name published after the appointed day, the word of which that name consists or on which it is based is a word transliterated into the Latin alphabet from an alphabet, for the transliteration of words from which rules are provided in the Schedules to the *Règles* and the method of transliteration adopted is not in accordance with those rules ; (paragraph 29)

Note:—If it were to be decided to treat the emendation, after the appointed day, of all names in the same way, irrespective of whether the words of which those names consist contain errors of transliteration or spelling mistakes, item (c) would need to be deleted.

- (4) that the Article referred to in (2) (c) above should provide that, where, prior to the appointed day, an emendation has been published for a scientific name, other than a name belonging to either of the classes specified in (a) and (b) of (3) above, on the ground that the word of which that name consists or on which it is based contains either an error of transliteration or a spelling mistake, it shall be open to the Commission, on receipt of an application by specialists, to direct, subject to the procedure specified in (6) below, that the emendation so published or, if more than one emendation has been published, one of those emendations be adopted ; (paragraphs 26, 35)
- (5) that the Article referred to in (2) (d) above should provide that, save as regards scientific names belonging to any of the classes specified in (3) above, the right to emend scientific names shall be exercisable only by the Commission, acting on an application submitted by specialists and acting in accordance with the procedure specified in (6) below ; (paragraphs 28, 36)
- (6) that an Article should be inserted in the *Règles* providing that, where, under any of the provisions specified in (3) (b), (4) and (5) above, an application is submitted to the International Commission on Zoological Nomenclature either that it should direct that a given emendation published prior to the appointed day is to be accepted or, as the case may be, that it should itself emend a scientific name for which no emendation was published before the foregoing date it shall be the duty of the Commission (i) to give public notice of the receipt of the application in question in like manner as though it were an application involving the possible use of its plenary powers, and (ii), in reaching its decision in the light of the information contained in the application submitted and of any other information subsequently elicited, to pay regard

not so much to considerations of an etymological or philological character as to the nature of current nomenclatorial practice and the need for promoting stability in nomenclature ; (paragraph 26)

- (7) that in connection with the provisions specified in (4) above and in section (a) of (2) above that no emendation published prior to the appointed day is to be accepted unless and until the International Commission on Zoological Nomenclature so direct, there should be inserted a *Recommandation* urging that no emendation which is in current use at the time of the coming into operation of the revised scheme should be abandoned in favour of the original spelling of the name concerned until the question whether that emendation is to be accepted or, as the case may be, rejected has been submitted to, and decided by, the Commission ; (paragraphs 26, 35)
- (8) that, in order to meet the situation which may arise where, prior to the appointed day, an erroneous spelling change has been accepted by specialists as a valid emendation, a provision should be inserted authorising the International Commission on Zoological Nomenclature, on receipt of an application from specialists, to direct, subject to the procedure specified in (6) above, that the erroneous spelling change in question be accepted as a valid emendation ; (paragraph 21)
- (9) that there should be inserted at some appropriate point in the *Règles* a *Recommandation* recommending that, when an author publishes a new scientific name, he should (a) state what is the origin of the word selected for that name or, alternatively to state that the word in question consists of an arbitrary combination of letter, and (b), in connection with any new trivial name, to state whether the word selected for that name is a noun substantive or an adjective ; (paragraph 43)
- (10) that, in order to avoid unnecessary repetition and to save the time of the International Commission on Zoological Nomenclature and to husband its limited financial resources, a provision should be inserted in the scheme authorising the Commission, when dealing with an application relating to the emendation of a trivial name, to give a ruling not only as to the spelling of the word in question as used as the trivial name of the taxonomic unit covered by the application submitted but also as to the spelling of that word as used as the trivial name of any other taxonomic unit ; (paragraph 46)

- (11) that a provision should be inserted in the *Règles* confirming rulings in regard to the emendation of individual names by the International Commission on Zoological Nomenclature before the appointed day either in *Opinions* or when placing names on either of the *Official Lists* ; (paragraph 49)
- (12) that a provision should be inserted in the *Règles* providing for the repeal, as from the appointed day, of the present Article 19 and of the provisional amendments thereto adopted by the Thirteenth International Congress of Zoology, Paris, 1948 ; (paragraph 50)
- (13) that, concurrently with the revision of the Law of Emendation on the lines suggested in (1) to (12), there should be inserted in the *Règles* a provision that, for the purposes of the Law of Homonymy, the under-mentioned classes of name should be accorded status as follows :—

| <i>Class of name</i> | <i>Status to be accorded</i> |
|----------------------|---|
| Valid emendation | to replace the original spelling of the name concerned, to take priority as from the date of publication of the original name in its incorrect form and to be attributed to the author by whom that name was published (paragraph 19). |
| Invalid emendation | to rank as a separately published name, and therefore (i) to take priority as from the date on which it was published, (ii) to be attributed to the author by whom it was published, (iii) to be available as a replacement name, provided that the difference in spelling between it and the name which it was intended to replace is not so slight as to render it a homonym of that name, (iv) to render invalid, as a junior homonym, any later use of that name as a generic name or, if the name is a trivial name, any later use of that name in the genus concerned (paragraph 19). |

| <i>Class of name</i> | <i>Status to be accorded</i> |
|-----------------------------|---|
| Erroneous spelling change | to possess no status in zoological nomenclature and accordingly not to be available as a replacement name and not to pre-occupy any later use of the name (paragraph 20). |
| Erroneous original spelling | to possess no status in zoological nomenclature (paragraphs 19, 45). |

(14) that, concurrently with the revision of the Law of Emendation on the lines suggested in (1) to (12) above, provisions should be inserted in the *Règles* relating to the under-mentioned problems allied to, but distinct from that of the emendation of scientific names:—

- (a) an Article defining the spelling to be accepted as the original spelling of a scientific name in cases where two or more spellings were employed when a given name was first published; (paragraph 52)
- (b) an Article prescribing the procedure to be followed in the selection of connective vowels linking two parts of a compound name; (paragraph 53)
- (c) an Article prescribing the procedure to be followed in forming an adjectival name based upon the name of a place, when the termination “-ensis” is employed (paragraph 54).

57. Request to specialists for comments and advice: In the two immediately preceding paragraphs I have summarised the conclusions which I have reached as to the general principles which, I suggest, should form the foundation of any scheme for the revision of the Law of Emendation (paragraph 55) and have set out in the form of the heads of a draft scheme suggestions which I wish to put before zoologists as to the actual rules which might be adopted for regulating this matter (paragraph 56). It will be seen that, as regards the former, a more modern—because less classical—approach is suggested and one moreover which pays regard to the need for maintaining stability in the spelling of names. As regards the latter, the suggestions put forward will, I hope, be looked at not only individually but also collectively as forming constituent parts of a projected whole, for the scheme has been drafted in the hope of securing as wide as possible a measure of support and accordingly, while weighted in favour of a very substantial reduction of the field within which the emendation of names would be permissible, contains also certain provisions specially designed to meet the wishes of those zoologists, whose natural inclination would be in favour of a much wider measure of emendation than would be possible under the draft scheme now submitted.

In its broad outlines, that scheme is extremely simple; the grounds for emendation are greatly narrowed; in only a very limited range of circumstances would the automatic emendation of names be permitted; in all other cases emendations would either be subject to confirmation by the International Commission on Zoological Nomenclature or would be capable of being made only by that body, which, it is proposed, should be given instructions to ensure that, in deciding applications for the emendation of names, it should guide itself mainly by regard to current nomenclatorial practice and the wishes of interested specialists as elicited by the public notice which it is proposed should be an obligatory preliminary to the consideration of any application relating to this class of problem. With this explanation I now lay the problem of the emendation of names before zoologists for their consideration and for their comments and advice.

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IMPORTANT NOTICE

The papers published in the present Part have been prepared for the express purpose of drawing attention to certain important questions relating to the clarification, amendment and expansion of the *Règles Internationales* which will be considered by the Fourteenth International Congress of Zoology at its meeting in Copenhagen in 1953.

Interested specialists are particularly invited to furnish comments and advice on the foregoing questions, so that account may be taken of their views in the formulation of recommendations to the Copenhagen Congress.

Specialists responding to the foregoing appeal will render a double service to the International Commission on Zoological Nomenclature, if, when they furnish statements setting out their views, they will be so good as to send those statements, typewritten on one side of the page only, double-spaced and with wide margins. All such statements should be furnished in duplicate.

Unnecessary work and consequent delay are caused in the office of the International Commission, if statements on two or more subjects are sent on a single sheet of paper, owing to the copying which this involves. Correspondents are therefore particularly requested, when furnishing notes to the Commission on more than one subject, to use a separate sheet of paper for the note on each subject.

All communications should be clearly marked with the Commission's Reference Number and should be addressed to FRANCIS HEMMING, C.M.G., C.B.E., Secretary to the International Commission on Zoological Nomenclature, 28 Park Village East, Regent's Park, London, N.W.1, England.